1946 - 1947

CATALOG

BULLETIN OF

THE STOUT INSTITUTE

MENOMONIE » » » WISCONSIN

COLLEGE CALENDAR

SECOND SEMESTER 1945-46

Monday, January 28, Registration for Second Semester.
Tuesday, January 29, Second Semester Classes Convene.
Monday, April 1, Midsemester Registration.
Wednesday, April 17, 3:00 P. M., Spring Vacation Begins.
Thursday, April 25, Classes Resume.
Sunday, June 2, Baccalaureate Address.
Friday, June 7, Commencement.

SUMMER SESSION 1946

Monday, June 17, Summer Session Begins.
Friday, August 16, Summer Session Closes.

REGULAR SESSION 1946-47

Monday, September 9, Regular Session Begins.
Tuesday, September 10, Registration for Freshmen and Other New Students.
Wednesday, September 11, Registration for Matriculated Students.
Thursday, September 12, Classes Convene.
Monday, November 11, Midsemester Registration.
Friday, December 20, 3:00 P. M., Christmas Vacation Begins.
Monday, January 6, 1947, Classes Resume.
Friday, January 24, First Semester Ends.
Monday, January 27, Registration Day for Second Semester.
Tuesday, January 28, Classes Convene.
Monday, March 31, Midsemester Registration.
Wednesday, April 2, 3:00 P. M., Spring Vacation Begins.
Thursday, April 10, Classes Resume.
Sunday, June 1, Baccalaureate Address.
Friday, June 6, Commencement.

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BOARD OF TRUSTEES

(January 1, 1946)

Employee Members	Term Expires
Emil Waldow, Green Bay	1947
John Wiechers, Racine	1949
E. R. Fransway, Wauwatosa	1951
Agricultural Members	
Frank C. Horyza, Superior	1947
John Last, Lake Mills	1949
Robert L. Pierce, Menomonie	1951
Employer Members	
A. A. Laun, Kiel	1947
Fred Vogt, Milwaukee	1949
Jessel S. Whyte, Kenosha	1951

Ex-Officio Members

John Callahan, State Superintendent of Public Instruction, Madison.
Voyta Wrabetz, State Industrial Commission, Madison.
Clarence Greiber, Director, State Board of Vocational and Adult Education, Madison.

Officers of the Board

President - - - - - - Jessel S. Whyte, Kenosha
Vice-President - - - Robert L. Pierce, Menomonie
Secretary - - - - - - Lloyd E. Berray, Madison

Stated Meetings of the Board

Regular quarterly meetings of the Board are held on the fourth Monday in March, June, and September, and on the third Monday in December.

OFFICERS OF ADMINISTRATION

VERNE C. FRYKLUND, President.
CLYDE A. BOWMAN, Dean, Division of Industrial Education. Director of Summer Session.
RUTH E. MICHAELS, Dean, Division of Home Economics.
KETURAH ANTRIM, Dean of Women.
MERLE M. PRICE, Dean of Men.
RAY A. WIGEN, Graduate Adviser.
GERTRUDE M. O'BRIEN, Registrar, Placement Chairman.
MINNIE J. BECKER, Secretary to the President.
BRYARD M. FUNK, Business Manager.
RUDOLPH ROEN, Superintendent of Buildings.
H. O. STROZINSKY, Chief Engineer.
MRS. DELMA PROUDLOCK, College Nurse.
DR. GEORGE BRYANT, College Physician.
ANN HADDEN, Director of Cafeteria.
MRS. CHARLOTTE GIST, Director of Halls and Housing, Hostess of Tainter Hall.
MRS. MAE F. MOSES, Hostess of Tainter Annex.
MRS. PEGGY TREZONA, Hostess of Eichelberger Hall.
HOWARD SCHWEBKE, Resident Head, Lynwood Hall.

* * *

LILLIAN M. FROGGATT, Librarian.
MRS. BEULAH C. HOWISON, Assistant Librarian.
MYRTLE STRAND, Assistant Librarian.

* * *

MRS. JOYCE ANDERSON, Office Assistant—Stenographer.
MARY CHINNOCK, Office Assistant—Stenographer.
JANET KOTHLOW, Office Assistant—Stenographer.
SARA SPEIDEL, Office Assistant—Stenographer.
AGNES WINSTON, Office Assistant—Stenographer.

FACULTY

VERNE C. FRYKLUND, President.
The Stout Institute, Diploma, 1916; Colorado College of Education, A. B., 1923; University of Missouri, M. A., 1927; University of Minnesota, Ph. D., 1933; The Stout Institute since 1945.

KETURAH ANTRIM, Physical Education.
Lake Forest University, Lake Forest, Illinois, B. A., 1923; University of Wisconsin, Ph. M., 1932; The Stout Institute since 1936.

HERMAN C. ARNESON, Biology.
Northland College, B. A., 1930; University of Minnesota, M. A., 1932; The Stout Institute since 1945.

WILLIAM R. BAKER, Printing and Publications.
Northern Illinois Teachers College, Diploma, 1913; Mergenthaler Linotype School, Certificate, 1920; The Stout Institute, B. S., 1925; University of Minnesota, M. A., 1936; The Stout Institute since 1933.

CLYDE A. BOWMAN, Industrial Education.
State Normal, River Falls, Wisconsin, Diploma, 1907; The Stout Institute, Diploma, 1909; Columbia University, B. S., 1915; University of Wisconsin, M. S., 1927; The Stout Institute since 1919.

ARTHUR G. BROWN, Education.
Macalaster College, B. S., 1914; University of Wisconsin, M. S., 1928; The Stout Institute since 1920.

MARY LOUISE BUCHANAN, Foods and Nutrition.
Iowa State College, Ames, Iowa, B. S. 1915; M. S., 1927. The Stout Institute since 1927.

GERTRUDE L. CALLAHAN, English.
University of Chicago, Ph. B., 1912; University of Wisconsin, Ph. M., 1927; The Stout Institute since 1927.

DARVEY E. CARLSEN, Printing.
The Stout Institute, B. S., 1944; The Stout Institute since 1942.

LILLIAN CARSON, Related Arts.
University of Chicago, Ph. B., 1919; M. S., 1926; The Stout Institute since 1927.

DWIGHT D. CHINNOCK, Sheet Metal and General Metal.
River Falls Teachers College, Diploma, 1923; The Stout Institute, B. S., 1937; University of Minnesota, M. A., 1941; The Stout Institute since 1940.

HAROLD R. COOKE, Director of Music.
Certificates in Music Theory from Vienna, Austria and New England Conservatory of Music. Minneapolis College of Music, B. Mus., 1933; Mac Phail School of Music, M. Mus. Ed., 1940; The Stout Institute since 1934.

ELEANOR H. COX, Chemistry.
University of Wisconsin, B. A., 1921; M. A., 1939; The Stout Institute since 1942.

MARGARET WINNONA CRUISE, Foods and Nutrition.
University of Toronto, B. A., 1912; Columbia University, M. A., 1918; The Stout Institute since 1927.

MARCELINE ERICKSON, Speech.
Columbia College of Expression, Chicago, Ill., 1927 and 1928; Lombard College, B. A., 1929; University of Iowa, M. A., 1932; The Stout Institute since 1940.

H. F. GOOD, Auto Mechanics, Electrical Work, Science.
Iowa State College, B. S. in Electrical Engineering, 1913; B. S. in Agricultural Engineering, 1914; M. S., 1929; The Stout Institute since 1918.

DANIEL GREEN, Machine Drawing, General Drawing.
University of Chicago, B. S., 1914; University of Minnesota, M. A., 1932; The Stout Institute since 1924.

FRANK W. GRUBE, English.
Rutgers University; Shurtleff College, Ph. B., 1928; Columbia University, M. A., 1929; University of Iowa, Ph. D., 1933; The Stout Institute since 1945.

ANN HADDEN, Foods, Institutional Management.
Iowa State College, B. S., 1932; Kansas State College, M. S., 1940; The Stout Institute since 1940.

H. M. HANSEN, Advanced Woodwork. (on leave)
The Stout Institute, Diploma, 1918; B. S., 1928; University of Minnesota, M. A., 1936; The Stout Institute since 1912.

MARGARET E. HARPER, Home Economics Education.
Kansas Wesleyan University, B. S., 1929; Kansas State College, M. S., 1943; The Stout Institute since 1943.

LILLIAN JETER, Clothing and Related Art.
Kansas State Agricultural College, B. S., 1916; Columbia University Teachers College, M. A., 1925; The Stout Institute since 1927.

DOROTHY JOHNSON, Home Economics Education.
Kirksville, Missouri, State Teachers College, B. S., 1928; University of Missouri, A. M., 1933; Teacher Trainer for Vocational Homemaking Education, State Board of Vocational and Adult Education; The Stout Institute since 1936.

RAY C. JOHNSON, Physical Education, Athletics.
State Teachers College, Moorhead, Minnesota, B. E., 1930; Columbia University, M. A. 1935; The Stout Institute since 1938.

FLOYD KEITH, General Metal, Sheet Metal.
River Falls Normal, Diploma, 1915; The Stout Institute, B. S., 1922; Iowa State College, M. S., 1929; The Stout Institute since 1922.

RAY F. KRANZUSCH, Auto Mechanics, General Mechanics.
The Stout Institute, B. S., 1936; Iowa State College, M. S., 1941; The Stout Institute since 1924.

ANNE MARSHALL, Biological Science.
Denison University, Granville, Ohio, B. S., 1925; Ohio State University, M. A., 1928; Ph. D., 1939; The Stout Institute since 1939.

MARY M. McCALMONT, Chemistry.
Westminister College, New Wilmington, Pennsylvania, B. S., 1906; University of Wisconsin, M. S., 1921; The Stout Institute since 1912.

RUTH E. MICHAELS, Home Economics Education.
The Stout Institute, Diploma, 1905; University of Chicago, Ph. B., 1922; Columbia University, M. A., 1923; The Stout Institute since 1927.

HAROLD C. MILNES, Machine Shop, Foundry, Patternmaking.
Armour Institute, Certificate, 1906; The Stout Institute, B. S., 1928; Iowa State College, M. S., 1936; The Stout Institute since 1916.

MILDRED MOORE, Home Economics Education.
Penn College, B. A., 1927; Iowa State College, M. S., 1943; The Stout Institute since 1943.

PAUL C. NELSON, Woodwork, Carpentry, Visual Education.
The Stout Institute, B. S., 1932; Iowa State College, M. S., 1934; The Stout Institute since 1926.

ERICH RICHARD OETTING, Psychology and Education.
Wayne State Teachers College, Wayne, Nebraska, B. A., 1924; University of Wisconsin; University of Nebraska, M. A., 1935; Ph. D., 1941; The Stout Institute since 1945.

MERLE M. PRICE, Social Science.
State Teachers College, St. Cloud, Minnesota, Diploma, 1921; University of Minnesota, B. S., 1924; M. A., 1929; The Stout Institute since 1929.

HENRIETTE L. QUILLING, Home Economics Education. (on leave)
The Stout Institute, B. S., 1931; M. S., 1939; The Stout Institute since 1937.

SIGRID RASMUSSEN, Related Art.
University of Wisconsin, B. S., 1929; Teachers College, Columbia University, M. A., 1941; The Stout Institute since 1945.

J. E. RAY, Architectural, Mechanical and Freehand Drawing, Masonry, Building Construction.
Williamson Trade School, Diploma, 1908; The Stout Institute, B. S., 1922; Iowa State College, M. S., 1930; New York University, Ed. D., 1944; The Stout Institute since 1930.

CORYDON L. RICH, Mathematics and Science.
State Teachers College, Oshkosh, Wisconsin, Ed. B., 1929; University of Wisconsin, Ph. M., 1930; The Stout Institute since 1931.

MABEL C. ROGERS, Foods and Nutrition.
Michigan State College, B. S., 1910; Columbia University, A. M., 1917; The Stout Institute since 1935.

PHYLLIS SCHWEBKE, Home Economics Education.
The Stout Institute, B. S., 1942; The Stout Institute since 1944.

BOYD CARLISLE SHAFER, History and Social Science. (on leave)
Miami University, B. A., 1929; State University of Iowa, M. A., 1930; Ph. D., 1932; The Stout Institute since 1932.

BENITA GROTE SMITH, Director of Nursery School.
Iowa State College, B. S., 1928; Merill-Palmer School, Detroit; Iowa State College, M. S., 1941; The Stout Institute since 1943.

GEORGE A. SODERBERG, Woodwork.
The Stout Institute, B. S., 1944; The Stout Institute since 1945.

A. STEPHEN STEPHAN, Sociology and Economics.
University of Richmond, B. A., 1926; University of Chicago, M. A., 1930; University of Minnesota, Ph. D., 1936; The Stout Institute since 1939.

GLADYS TRULLINGER, Home Administration.
University of Nebraska, B. S., 1926; M. S., 1936; The Stout Institute since 1936.

F. E. TUSTISON, Mathematics, Science, General Mechanics.
Ohio Wesleyan University, B. S., 1909; University of Wisconsin, M. S., 1928; The Stout Institute since 1920.

HAZEL VAN NESS, Clothing.
Syracuse University, B. S., 1921; Columbia University, A. M., 1929; The Stout Institute since 1929.

RAY A. WIGEN, Supervisor of Practice Teaching.
River Falls State Teachers College, Diploma, 1916; University of Minnesota, B. S., 1930; M. A., 1933; The Stout Institute since 1933.

EDUCATION AND POSTWAR OPPORTUNITIES

During the war, many men and women of The Stout Institute served in the armed services, in war production, and in the home front. These men and women were unusually well prepared for these various war activities, and the college is proud indeed of their records. As the nation moves into the many problems and adjustments of the postwar period, The Stout Institute continues its contributions to the national progress.

During the war, adjustments were constantly made in the program of work at The Stout Institute to fit war requirements. Many of these adjustments included opportunities for accelerated progress due to emergency requirements. Standards were maintained.

Since 1893, The Stout Institute has been training teachers for Vocational, industrial and home economics education. During the years of its work, it started with a two year course, then the four year course and then in 1935, the fifth year on the graduate level, leading to the degree of Master of Science, was authorized. During these years of development and expansion, it held consistently to the function of preparing teachers and administrators in these fields of work.

Men and women returning to civilian life at this time will find educational opportunities at The Stout Institute fitted to their needs and to the educational responsibilities in the postwar society. In its agreements with the Veterans Administration, the college has made provision for veterans to enroll at the beginning of any one of the four nine-week periods during the thirty-six week regular college year and at the beginning of any one of the three three-week periods in the nine week summer session. Students may enroll at any of the enrollment periods and attend both regular and summer sessions through to graduation.

Provisions are made for students to complete requirements for the degree of Bachelor of Science or to take undergraduate work beyond the degree requirements for refresher purposes. Beginning with the second semester of the college year 1945-46, graduate work has been offered during both the regular session and the summer session. This curriculum leads to the degree of Master of Science with the major in vocational education, industrial arts education, or home economics education. For persons interested in educational work in these fields, The Stout Institute has unusual facilities and an unexcelled faculty.

HISTORY

With the creation of the State of Wisconsin in 1848 there came immediate recognition of the educational needs of the new commonwealth. Teacher training received prompt attention in the creation of its first normal school. Massachusetts and Pennsylvania preceded Wisconsin in the organization of normal schools; but the record shows that in 1867, less than twenty years later, Wisconsin was leading even these two states and all other states in the number of state normal schools in operation.

In 1867 Wisconsin was operating five state normal schools, just one more than existed in any other state. Today the state's present political and educational leadership is dedicated to the further development of the state's educational equipment and professional standards.

In 1911, because of the importance of Industrial and Home Economics Education in the schools of the state, The Stout Institute was taken over by the state from a private ownership and operation. By legislative enactment Stout was made the state's teacher training school for teachers in these two fields of education. The Stout Institute has for almost a half century devoted its efforts to the preparation of teachers in Home Economics, Industrial and Vocational Education.

Here follows a brief summary of the history of The Stout Institute.

In 1889 Manual Training was inaugurated in the Menomonie Public Schools in all twelve grades through high school.

1893 new buildings were built and Manual Training was placed under separate supervision.

1903 The Stout Training School was founded under private patronage. The name was changed to The Stout Institute in 1908.

1911 The Stout Institute was presented to the state, accepted and placed under the control of the Board of Trustees of The Stout Institute.

1917 The Stout Institute was by legislative action made a college with degree granting power.

1935 Through legislative action The Stout Institute was authorized to undertake graduate work and to grant the Master of Science degree with designated majors in (1) Industrial Education (2) Vocational Education or (3) Home Economics Education.

The Stout Institute was founded as "Stout Manual Training School" by Senator James H. Stout, of Menomonie, who financed the institution through twenty-two long critical years up to the time of his death in 1910.

The history would not be complete without the mention of Lorenzo Dow Harvey, who, retiring from the State Superintendency of Instruction in Wisconsin, on the urgent invitation of Senator Stout, assumed the presidency in 1903 of The Stout Manual Training School and later The Stout Institute. President Harvey continued in charge of The Stout Institute until the time of his death in June, 1922.

AIMS OF THE COLLEGE

The Stout Institute is the Wisconsin state college of industrial and home economics education. It specializes in technical training of men and women for professional work in these fields. While technical training is emphasized at The Stout Institute, the curriculum is designed to give students a well-rounded education. Departments are maintained in the social sciences, English, mathematics, and sciences. Physical education, music, dramatics, etc., are important factors in the college curriculum. The Stout Institute believes that men and women should not only be technically trained, but also should be provided with the kind of education which will make them responsible and informed citizens, equip them with an understanding of our changing civilization, and enable them to enjoy the arts of living.

The main job of The Stout Institute is to prepare teachers in industrial, vocational and home economics education. Stout is the only college in America exclusively training students in these fields. Stout not only prepares for the teaching profession, but also a variety of other work.

Students in industrial education may prepare for technical and executive positions in industry. Industrial education graduates have found advantageous employment as trainers in industrial plants education departments, in production and planning departments of manufacturing plants, in maintenance departments, as technically trained salesmen, and in various other types of employment in industry.

The home economics education courses at Stout provide preparation directed toward a variety of work other than teaching. Students may train for responsible positions as dietitians, teachers and supervisors of nursery schools, managers of cafeterias and restaurants, in commercial demonstration work, in food and textile research, and as writers on home economics problems for magazines and newspapers. Home economics education, for women, regardless of what field a student may plan to enter, is the kind of technical and cultural education which will prepare women for a more satisfying life.

While the greater part of the students come from Wisconsin, almost every state in the Union has been represented in the enrollment at The Stout Institute. Through these years the enrollment at Stout has been more than national in character. In any one year as many as thirty-eight states have been represented and always students have been in attendance from our territorial possessions.

Stout graduates are teaching in every state in the Union, in Canada, the Canal Zone, Hawaii, Cuba and the West Indies.

COLLEGE ASSOCIATION AFFILIATIONS

Soon after The Stout Institute restricted its work to a four-year curriculum, it was accepted by the North Central Association as a member of the teachers college group and two years later was taken into full college membership. Since the formation of the American Association of Teachers Colleges, The Stout Institute has maintained membership in that organization. The college is also a member of the American Council on Education.

BUILDINGS AND GROUNDS

Four large, thoroughly equipped buildings (the Home Economics Building, the Industrial Education Building, the Gymnasium, and the Trades Building) comprise the central plant. In addition there are three dormitories, sixteen small houses for veterans, a home management house, and an infirmary.

The grounds include spacious lawns for the women's dormitories and veterans homes, a practice field, tennis courts, and the Burton E. Nelson Athletic Field. During the fall of 1935, a shelter house was constructed, which includes dressing rooms and shower rooms for two teams. The administration plans for the immediate future include the construction of a new library building, and a new field house, the site for which the state recently purchased.

The need for these two structures has this year been recognized by the Legislative Interim Committee in its report to the legislature in January of this year. Following the report of the committee the legislature promptly passed the bill providing for the construction of these two buildings as a part of a postwar building program of the state. Preliminary plans for these two buildings are now in preparation in the office of the State Architect.

The Library

The Library is at this time housed in the Home Economics Building. It provides a wide range of reference material, particularly on home economics and industrial and vocational education, but is also rich in

fields of art, the social and natural sciences, economics, history and government, mathematics and engineering, manufacturing and industry. A large number of books and magazines for purely cultural reading is provided.

Laboratories and Equipment

The shops for the teaching of industrial subjects are all well equipped and kept up-to-date. The Trades Building is devoted exclusively to shops containing all needful equipment for elementary and advanced classes in carpentry, cabinetmaking, general woodwork, auto mechanics, sheet metal, painting and finishing, architectural and machine drafting, and visual education. A modern industrial mechanics shop has just been added. It has provision for use of all types of visual education equipment. The Industrial Education Building contains shops completely equipped for work in general mechanics, foundry, printing, general metal, electrical work, and machine practice. A physics laboratory and shops for practice teaching are also housed here. Necessary lecture rooms for general subjects are provided throughout the building.

The laboratories for home economics instruction are among the best in the country. All located in the large home economics and administration building, they include units for textiles and arts, nutrition and foods, nursery school, homemaking, and sciences. Lecture and demonstration rooms are comfortable and commodious. Throughout, the equipment is up-to-date and adequate for all levels of work.

Auditorium

One of the wings of the Home Economics Building houses a large, modern auditorium with a seating capacity of 800. At least once each week an attractive program of an educational or entertainment nature is presented by nationally known speakers or entertainers. The large stage makes possible the appearance of large musical organizations, local and traveling, and provides excellent facilities for work in dramatics.

Dormitories for Women

Bertha Tainter Hall is furnished with all modern conveniences, and is well-lighted, heated, and ventilated. This building was thoroughly remodeled recently, and the interior was completely modernized, redecorated, and largely refurnished.

Tainter Annex adjoining it has been remodeled, and modernized throughout. More light and room space are provided. Old bathrooms were removed and new bathrooms installed. Another living room and a sun room were added. The gray stucco on the outside has been replaced by fireproof asbestos shingles which add greatly to the appearance of the building and materially reduce fire hazard.

The Mary Eichelberger Hall has been so named because the building was purchased out of a $20,000 legacy provided for in the will of Mrs. Mary Eichelberger, of Horicon, Wisconsin.

The entire building, basement and three floors, will be completely reconstructed as a dormitory for women students as a postwar program as soon as materials and labor are made available.

This dormitory for women is on the same campus, bordering Lake Menomin, with Tainter Hall and the Annex. It has been planned to take care of twenty-four to thirty women.

All nonresident freshmen and sophomore women are required to live in dormitories. All junior and senior women under twenty-five years of age are also expected to live in dormitories, when accomodations are available.

Lynwood Hall was built for the purpose for which it is used and is in every appointment adequate and complete.

Recently elaborate improvements have been made. These include the enlargement of living and recreational rooms, sound proofing the building, installation of new bath and toilet facilities. Exterior improvements add materially to the appearance and attractiveness of the building.

Concerning All Dormitories

Room rent in dormitories is payable by semesters, in advance at the beginning of each semester. Board is payable four weeks in advance.

The charge for a room for each student for one semester of eighteen weeks is ~~$45.00~~ $54.00. This price applies to all dormitories.

In Tainter Hall and Annex, the charge for meals and a definite amount of laundry work for each student is $6.00 per week. A laundry in connection with the women's dormitories provides service to students in those dormitories at a minimum charge. All Stout dining rooms are under the direct supervision of trained dietitians. Balanced meals are carefully planned with the thought in mind that the health of the students is of primary importance.

Rooms in dormitories will be available Sunday, September 8, 1946. Meals will be served beginning Monday noon, September 9, 1946.

All first year entrants and all transfer students must fill out an application form for a room and send it as early as possible to the Director of Dormitories at Tainter Hall. The necessary form is one of the several forms included in the enrollment papers.

All rooms are assigned for the entire academic year. Each room is furnished with two single beds, with mattresses and pillows for same, dresser, study table, chairs, bookcases, and rug. Sheets, pillowcases, and laundrying for same are also supplied. The student must supply dresser scarf, couch cover, waste paper basket, towels, blankets, or comfortables, and simple curtains which should be arranged for with roommate after assignment of room has been made.

Students are requested not to bring additional furniture, particularly floor lamps. A practical study lamp for the table with rubber insulated cord and plug is permissible and desirable. All such lamps will have to be inspected by the school electrician before they are used. Radios are not permitted in students' rooms. A community radio is supplied.

The Infirmary

The Stout Institute maintains an infirmary for the care of students, where every detail of health is carefully supervised. A resident registered nurse supervises the health of students throughout the college and is on duty at the infirmary. The nurse maintains regular office hours in her rooms in the Home Economics Building, where she can be consulted by students. A college physician is available for consultations. Students are given a medical examination annually.

A Student Health fee of two dollars and fifty cents per semester is paid by all students. This fee insures dispensary service, physical examinations and three days of hospital care without charge. After the third

day a charge of one dollar a day will be made for meals. Students rooming in dormitories where meals are served will not be charged for meals while in the infirmary.

Any student who is too ill to attend classes should report at once to the school nurse. Students living in Menomonie shall have their parents or guardian notify the school nurse. Cases of severe illness or other serious situations that will enforce prolonged absence should be reported to the Dean of Home Economics or the Dean of Industrial Education.

Home Management House

A thoroughly modern and fully equipped Home Management House located near the Infirmary is a brick veneer building, of ample size, containing all conveniences and accommodations needed in such a building. Recreation room, store room, and laundry are found in the basement. A large living room, dining room, kitchen, and director's living quarters are on the first floor. On the second floor are large comfortable, well-lighted student rooms. The building is heated by an oil burning furnace, and the air is conditioned for moisture and temperature by modern apparatus.

The Tea Room

The Stout Tea Room is used chiefly as a laboratory for the class in applied institution management. During the period given to instruction in institution management, attractive, well balanced, inexpensive meals are served under the direction of the director of institution management. On these occasions, the Tea Room is open to students, faculty and their friends.

The Cafeteria

The Stout Cafeteria, located in the east end of the Home Economics Building, is used by students, faculty, and their friends. The dining room is modern and colorful. Meals are served daily except Sunday. The food is excellent and inexpensive. Students can obtain adequate meals at from $4.00 to $5.00 per week. The complete cafeteria service is under the direction of the Director of Institution Management. Special groups may obtain reservations for meals from the Director. All nonresident freshman men are advised to eat their meals in the cafeteria, using meal tickets provided as a means of checking attendance. For the school year, 1946-47 the Cafeteria will open on Monday noon, September 9, 1946.

Other Living Facilities

Accommodations for men and women not living in dormitories may be procured in the city at varying rates, depending upon location and quality of service. Rooms may be had as low as $2.00 per week per person, and table board may be obtained in private homes at $5.00 to $6.00.

ADMISSION TO COLLEGE

Stout Institute provides five opportunities for registration during the year. Students may register in September, November, January and April, or the summer session.

Admission to college may be secured:

1. By presenting a certificate of graduation from an accredited high school.
2. By submitting evidence of studies successfully pursued in another institution of higher learning.
3. By qualifying as an adult special student.

Students who are not high school graduates are admitted upon giving satisfactory evidence of ability to do college work, if such students are twenty-one years of age or if they have had service in the U.S. Armed Forces. General Education Development examinations may be given.

Prospective students may learn at any time by correspondence with the Registrar whether or not they have the necessary qualifications for admission and upon what basis they may be admitted.

In September and January both semester and short term courses begin. In November and April short term courses in shop and drawing and education and home economics are available.

All credentials should be filed sufficiently in advance of the date chosen to permit the Registrar to pass upon them and to issue the proper letter of admission. Candidates for admission in September should have their credentials filed with the Registrar by the first of August. The credentials must in every case include a complete record of all previous secondary school and advanced work.

Persons who plan to enter Stout should fill out and file application for enrollment as early as possible. Blanks will be furnished promptly on request. The health certificate, when filled out must be forwarded to the President before the beginning of the semester. Late registration is discouraged. All students are expected to register on general registration days.

Entrance Requirements

Entrance requirements of The Stout Institute shall be interpreted as graduation from an approved high school or equivalent training. Not less than 15 units shall be accepted.

1. The following units shall be required of all:
   English ..... 3 units
   Algebra ..... 1 unit
2. Two units are to be presented from one of the following:
   Foreign Language, History, Social Science, Science.
3. In addition to the units required under 1 and 2, a sufficient number of units to make a total of fifteen must be offered from groups A and B. Not more than 5 units may be offered from group B.

Group A	Group B
English and Speech	Agriculture
Foreign Language	Commercial Subjects
History and Social Science	Home Economics
Mathematics	Industrial Arts
Science	Mechanical Drawing
Advanced Applied Music and Art	Optional (2 units)

4. A high school graduate need not meet the above requirements if he is recommended by his high school principal and if he stands in the upper one-half of his class. But it is required that wherever mathematics is a prerequisite for successful work in a course, the high school deficiency must be made up if it exists, and for this the college will not hold itself responsible for providing facilities.

All first year entrants and all transfer students are required to take Freshman Counseling Tests which are given during Registration Week. A special two dollar fee will be charged those who take the examinations at other than the scheduled time.

Mature students who are deficient in entrance credentials may take entrance credential examinations while in attendance.

A supplementary physical examination is made of all first year students and an annual examination of all students is required. The examination is made by the college physician. The charge for this examination is included in the infirmary fee referred to elsewhere. These credentials, together with an approved statement of rooming arrangements, are required before the enrollment is considered complete.

Transferred Credits

Students entering The Stout Institute who have had any work whatsoever in another institution of higher learning, regardless of whether or not they wish to receive credit for it, must submit complete credentials of both their high school and college work. All such transcripts and supplementary material should be sent at least a month preceeding the opening of the session the student desires to enter.

Students who hold bachelor's degrees from other institutions must spend one year in residence and meet the minimum requirements of their major in order to obtain the degree of Bachelor of Science from The Stout Institute.

Sixteen semester hours of approved courses done through extension or correspondence, not more than five semester hours of which shall be correspondence credit, shall be the limit accepted by The Stout Institute for graduation requirements.

Transfer of Records

Students wishing to transfer from The Stout Institute to another institution should request the Registrar to send a transcript of record and letter of dismissal, giving notice of at least one week.

Veterans

Curriculum adjustments will provide for a modified program to meet the needs of students who have had service in the U. S. Armed Forces.

Credit for educational experience in the U. S. Armed Forces will be assigned according to the recommendations of the Guide compiled by the American Council on Education.

REQUIREMENTS FOR GRADUATION

In order to receive a degree, the student not only must gain the required number of credits in the course which he is pursuing, but also must attain a certain standard of scholarship. This standard is fixed by points as credits. Grade points are apportioned as follows:

A (94-100) 3 grade points per semester hour credit.
B (86-93) 2 grade points per semester hour credit.
C (78-85) 1 grade point per semester hour credit.
D (70-77) 0 grade point per semester hour credit.
F (Below 70) Failure
Inc. "Incompletes" are given only in cases in which the absence incurred has been due to situations over which neither the student nor the teacher has any control. To secure an Incomplete, a student must have a passing grade in the course at the time of withdrawal.

Fully registered students at The Stout Institute, in the Division of Home Economics, must complete one hundred and twenty-four semester hours and earn one hundred and twenty-four grade points, plus the requirements in physical education. Students in the Division of Industrial Education must complete one hundred and twenty-eight semester hours and earn one hundred twenty-eight grade points, plus the requirements in physical education.

Each candidate for graduation must in addition to meeting the requirements in the major, have two academic minors of fifteen semester hours each.

The minimum residence requirement is thirty-two semester hours and thirty-two grade points to be earned in at least thirty-six weeks of attendance at Stout Institute. The last year of credit must be earned in residence at The Stout Institute.

THE DEGREE OF BACHELOR OF SCIENCE

The degree of Bachelor of Science is conferred upon all students completing curriculum requirements in the Division of Home Economics and in the Division of Industrial Education. These courses require four years of work beyond the high school. Upon completion of the work a diploma is issued, which by statute is made the basis for a life certificate after two years of successful teaching in Wisconsin. This life certificate legally qualifies the holder to teach in the public schools of the state the subjects in which he has taken training. The license is issued by the Wisconsin State Department of Public Instruction.

PLACEMENT OF TEACHERS

Stout Institute maintains a Placement Office which assists qualified graduates in finding suitable positions as teachers or administrators in the schools of Wisconsin and other states. The number of calls for Stout Institute graduates always exceeds the supply. Junior and senior students have been called upon to meet the needs in an emergency. Salaries of Industrial Education and Home Economics teachers are higher than in most of the teaching fields. Graduates of Stout Institute hold key positions in industry as well as in education in all states in the Union and in many foreign countries.

EXPENSE ESTIMATES CORRECTED

Estimates on Usual Expenses Incurred by a Student for a Regular Session of Thirty-Six Weeks

Fee for Library, Physical Education, Laboratories and Shops (Semester $ 20.00)	$ 40.00
Student Health Fee (Semester $2.50)	5.00
Room Average Dormitory Rate (Semester $54.00)	108.00
Board—Dormitory Dining Room or Cafeteria	198.00
Laundry (College or City)	25.00
S.S.A. Membership (Semester $7.00)	14.00
Material for Classes (average)	25.00
	$415.00
Tuition for Nonresidents (Semester $62.00)	124.00
Estimated Expenses for Residents	415.00
Estimated Expenses for Nonresidents	539.00

The fact that incidental expenses, amusements, traveling expenses, postage, clothing, personal supplies, etc., are not included in the above must be taken into consideration.

Due to the uncertainty in cost ranges it may be necessary to change the above estimates from semester to semester.

Tuition, Regular Session

The tuition charge for nonresidents and the definition of nonresidents are covered in the following quotation from the Wisconsin statutes:

"Any student attending The Stout Institute who shall not have been a resident of the state for one year next preceding his first admission thereto shall pay a tuition fee of one hundred twenty-four dollars for the school year and a proportionate amount for attendance at the summer session."

Tuition is payable in advance each semester.

Shop and Laboratory Fees

Fees charged for shop and laboratory courses are included in the $20.00 semester fee referred to above. In addition to the shop and laboratory fees, students are required to pay for any breakage or damage to buildings for which they are responsible. Fees are payable registration day at the beginning of each semester and summer session. The fee receipt is to be retained by the student to gain admittance to classes. A charge is made for duplicate receipts.

Library Fees

A library fee of $4.50 per semester formerly charged as a separate fee is now included in the $20.00 General Fee charge made to all students. For this fee all necessary textbooks are furnished from the loan textbook library without any extra charge to students. The reference library is supplied with standard books needed to supplement textbooks in different subjects.

The reading room is supplied with daily and weekly newspapers, educational, literary, and technical periodicals adapted to the needs of the students and available for their use.

In addition to The Stout Institute library, students have access to the Memorial Free Library one block from The Stout Institute main buildings. The combined facilities of the two libraries make available 52,000 volumes, exclusive of public documents.

Incidental Fees

Diploma Fee	$3.00
Special Examination Fee (taken in special cases only)	2.00
Lock Deposit $1.00—Refunded	.75

SCHOLARSHIPS

Mary J. Eichelberger Fellowship

Six fellowships will be awarded each year to graduate students who are qualified to teach or to assist in class and laboratory work. The sum of $360.00 will be paid to each fellow. Selection of candidates is made by a committee of deans and is based upon qualification for a particular assignment on the campus and professional promise.

Legislative Scholarships

Out of state tuition exemptions in the amount of $124.00 per year will be granted in accordance with the provisions in the Wisconsin Statutes.

Alumni Scholarships

In addition to scholarships offered by the college, The Stout Institute Alumni Association has set up and maintains a scholarship award fund providing several sixty dollar cash awards each year. Any prospective student interested in one of these awards should either personally contact a Stout Alumnus or write directly to the secretary of the Stout Institute Alumni Association at The Stout Institute, Menomonie, Wisconsin. The secretary can assist the prospective student in contacting a Stout alumnus where such assistance is needed. Any alumnus will be glad to give all the information needed and answer any questions which may arise concerning enrollment, attendance and college life at The Stout Institute.

Epsilon Pi Tau

Epsilon Pi Tau, national honorary scholastic fraternity in industrial arts education and vocational industrial education is represented on the Stout campus by Theta Chapter. During the war, the Chapter has been maintained on a standby status. Activities of the Chapter will be resumed and with this resumption of activity will come certain scholastic financial awards.

Manual Arts Players

The Manual Arts Players Chapter of Alpha Psi Omega will offer a scholarship of twenty-five dollars to a student outstanding in the field of dramatics.

Pallas Athene

The Pallas Athene Society grants a scholarship of twenty-five dollars each year to a Sophomore woman student, chosen on the basis of scholarship, participation in extra curricular activities, and her worthiness as a representative Home Economics Student of Stout.

Philomatheans

The Philomathean society grants a twenty-five dollar award to a Freshman Home Economics Major. The student is selected on the basis of desirable personal qualities, loyal participation in college activities, and excellent scholarship.

Phi Upsilon Omicron

Tau Chapter of Phi Upsilon Omicron, national honorary scholastic fraternity in Home Economics, grants an annual scholarship of twenty-five dollars to an outstanding Freshman woman majoring in Home Economics.

Y. W. C. A.

The Y. W. C. A. of The Stout Institute, mindful of the three-fold purpose of the organization (to aid in development of body, mind, and spirit of its members) attempts to help further this aim by making an award of twenty-five dollars to the young woman whom they think is attaining these goals for herself and is also an active participant in worthwhile activities upon the campus.

Foreign Students

A yearly grant of $300 will be available alternately for one Industrial Education and one Home Economics student residing outside of the United States and its territories.

STUDENT LOANS

In 1921 Mrs. Mary J. Eichelberger of Horicon, Wisconsin willed to The Stout Institute twenty thousand dollars in preferred stocks and cash. This legacy came to the institution without stipulation as to the

purpose or use to which it was to be put. For several years no use was made of this fund.

In 1942 the Administration recommended that the earnings from the principal and such part of the principal as might be necessary should be used in making loans to worthy and capable students when in need. No part of the principal has been used. The fund has, through dividends and interest additions, increased to a considerable sum. Ten thousand dollars is now being used by students in attendance or is being repaid by students who have graduated.

Students who in the opinion of the Committee are in need of financial aid may be granted a loan from the Student loan fund. The Committee considers the scholarship, character, personality, and professional promise of the applicant in granting a loan. Freshmen are not eligible to use this money. The loans are payable within one year after the student leaves the college.

SELF-SUPPORT AND STUDENT AID

While there are opportunities for a student attending Stout to earn a part of his expenses, it should be borne in mind that the courses are designed to require the whole of his time and effort and that the amount of outside work he will be able to do cannot be great. For this reason students whose funds are insufficient to meet their expenses for at least the first year, are not encouraged to enter college. Students working to earn part of their expenses are expected to carry a reduced program.

As far as possible, students are employed for extra work about the library, laboratories, and in the cafeteria, and as janitors. Some opportunities offer themselves outside of school agencies. A great deal depends, of course, upon the ability and energy of the individual, and his willingness to do any kind of work. The best places are usually obtained by those who have been in college for some time and have established themselves as good workers.

Stout does not guarantee employment. It does, however, make a special effort through its college employment bureau to locate students needing work as a means of paying expenses.

COLLEGE ACTIVITIES

The Stout Institute offers a wide range of student activities. Besides the regular classes in physical education for men and women, Stout is represented each year by strong football, basketball, baseball, and track teams. Glee clubs, one for the men and one for the women, have been maintained for a number of years. The Symphonic Singers, an A Cappella choir as well as a band and an orchestra add greatly to the life of the school. All musical organizations are under the supervision of a trained and capable director. Dramatics is centered in the organization known as the Manual Arts Players Chapter of Alpha Psi Omega. A permanent Lyceum committee is maintained, operating each year a five and six number course of the very best talent available. Assemblies bring to the students many excellent lectures, entertainers, musicians, artists and musical organizations of outstanding ability. The college paper, The Stoutonia, is published each Friday. The Tower, the college yearbook, is also a product of student activities at Stout.

All of these organizations through contests, concerts, plays, programs, contribute to the social life of the school. The management of admission, booking and relationship with various student activities

is through the Stout Student Association, the officers of which are elected each spring at a regular all-school election.

The membership charge, $14.00 per year, is payable by all students, $7.00 at the beginning of each semester. This fee gives every student of the college admission to all athletic events including football, basketball, and baseball, all concerts by student musical organizations including the Band, Orchestra, Men's Glee Club, and Women's Glee Club, productions of the Manual Arts Players, all lyceum and assembly programs and other entertainments under the supervision of the student association, educational and other lectures, all student dances given under the auspices of the student association, and the subscription to the student weekly newspaper, The Stoutonia, the Tower, the college annual, and class membership. The Stout Student Association membership has eliminated the necessity for the many former student drives for the financial support of the usual college activities. The only exceptions are religious and social organizations. The Association has added much to the social atmosphere of the school and has systematized and made harmonious all school activities.

REFUNDS

Students who are compelled to withdraw from college by reason of illness, not due to poor physical conditions or ill health existing before entering, are entitled to a refund of tuition from the date when notice of such withdrawal is received to the end of the semester.

Students boarding in the domitories are also entitled to a refund of whatever amount has been advanced for board beyond the date when notice of withdrawal is received.

Refund for advance payment of room rent in the dormitories is allowed from the date when the room is again rented. Effort is made to get an occupant at the earliest date possible.

As books and supplies for which fees are charged have to be bought in advance in quantities necessary to supply the entire enrollment, no refund of fees is made in any case.

GRADUATE PROGRAM

GENERAL PLAN

The graduate program at The Stout Institute is established to meet the present-day service requirements for teachers and administrators of Home Economics Education and Industrial Education. There are two types of teachers required for these fields of education; namely, general education and vocational education. The teacher certification laws, the trade experience, the educational preparation, and professional objectives determine the type of graduate program essential to meet the needs of these teachers. The graduate curriculum is planned so prospective teachers and administrators may earn the degree of Master of Science with the major in Industrial Education, Home Economics Education or Vocational Education.

OBJECTIVES

The objectives of the graduate curriculum are:

1. Extension of the broad general culture of teachers.
2. Preparation in research procedures in home economics and industrial education.

3. Continued study for specific competency in one of the major fields: Home Economics, Industrial Education or Vocational Education.

4. Attainment of advanced skills in professional techniques or exploring new techniques.

5. Opportunity for concentrated study of more strictly professional phases of teaching for those whose undergraduate study did not make adequate provision.

6. Provision for the development of desirable personal and social qualities of teachers.

ADMISSION

Students who hold the degree of Bachelor of Science from The Stout Institute, or its equivalent, may take graduate courses. Undergraduate records from colleges other than The Stout Institute are accepted from institutions which are accredited members of the American Association of Teachers Colleges, or of their appropriate regional accrediting agency, or State Board of Education, or State University. Important considerations of the graduate committee in granting approval on admission applications will be: An approximate grade point average of 1.5 as an undergraduate; satisfactory practical or teaching experience. Students whose candidacy has not been clearly established will be accepted on probation. (Graduate credit earned will not apply toward the requirements for the degree of Master of Science until after the student has been accepted as a candidate for the degree. Examinations for admittance to candidacy will be scheduled at the end of the student's first nine weeks of graduate work in the regular session or during the second summer of graduate attendance when the work is being taken in summer sessions.) Students whose undergraduate work was not taken at The Stout Institute should have their transcripts sent to the Registrar not less than one month prior to the opening of the summer session. For those who wish to become candidates for the degree of Master of Science with a major in Vocational Education, eligibility will be based upon a Bachelors degree from an accredited college plus at least one year or equivalent of full-time successful, certified vocational teaching experience.

Graduate students in the regular session pay graduate course fees at the rate of $3.00 for each semester hour of credit carried. Graduate students also pay the Student Activities fee of $7.00 per semester. Students who are not residents of Wisconsin pay the nonresident tuition of $62.00 per semester.

PROGRAM

The graduate program is organized so the major areas of graduate student preparation are based on the objectives of the program. The major areas are philosophy of education, psychology, curriculum construction, research procedures, administration, supervision, master teacher, special fields, methods of instruction, social and economic competency, personnel service, measurement and evaluation, and field service problems. The individual graduate student will work with his adviser in his major field in a formulation of a tentative distribution of work.

COURSES

Courses available for graduate work are classified in three groups. Special graduate conference schedules are maintained each summer to give graduate students specific aid in planning their sequences and selecting courses.

The professional objectives of the individual student and the general requirements for graduate work will be included in the considerations used as a basis in defining the ultimate program. In the arrangement of graduate courses in the three groups, the general purpose is as follows:

Group I

Minimum requirements—four to six hours (Four semester hours if any courses in this group have been taken for undergraduate credit). Includes basic professional courses.

Group II

Minimum requirements—six semester hours selected from this group or from courses remaining in Group I. This is primarily an elective group with selections determined by the student's general and professional interests.

Group III.

Minimum requirements—fifteen semester hours.

This group is for the development of sequences of concentration in the professional advancement of the individual student. Selections of courses to develop sequences in this group will consider the individual's professional progress to date, present location, and expanding responsibilities. The plan of concentration in this group is developed through conferences, therefore it will constitute a significant control in the selection of the investigation title.

The maximum credit allowed for the investigation will be six semester hours. The approval of the investigation selection will be made with the guidance and approval of the graduate committee and the dean of the division in which the student is majoring.

Credit requirements by groups are indicated in minimums. The maximum credit taken in each group will be determined by the fields of emphasis and concentration in the individual student's plan.

A student credit sheet is used for control of student-faculty cooperative planning. The student credit sheet includes instructions for the general plan of the graduate program, professional objectives of the student, and minimum credit requirements in the three groups of courses. The credit sheet makes it possible for faculty-student cooperative planning of the total program in terms of the student's professional objectives, selection of courses in terms of objectives and the maintenance of balance in the student's total preparation. The approval of the adviser and of the graduate committee will be necessary. Thirty semester hours of work will constitute the credit requirements. The student's plan will be arranged tentatively during the first summer session or the first nine weeks period in which he attends on a graduate basis. Work for the Masters degree must be completed within six years. Requests for extensions will be given consideration by the committee. The minimum length of time spent for graduate work shall be one year. Not more than six semester hours of graduate credit may be transferred from other institutions.

SUMMER SESSION 1946

The forty first annual summer session of The Stout Institute will be held during the summer of 1946, opening June 17th. Courses will be available on both the six and three week basis. Many units of work will be on the three week basis to make it possible for students to arrange a variety of combinations to meet the many new current and post war problems. The summer session bulletin issued in April gives full information on the courses and schedules.

Summer session classes are designed to meet the needs of various groups of people. Former students and graduates have an excellent opportunity for taking advanced work. Both graduate and undergraduate work will be offered. Members of the armed services personnel returning to civilian life will find the very flexible summer session schedule helpful in resuming professional training. Supervisors and teachers of industrial education or home economics can strengthen their work in techniques or in the field of education. All persons interested in specific studies related to work in industrial or homemaking courses will find much of interest in the summer session schedule. The Wisconsin State Board of Vocational and Adult Education through the use of federal teacher training funds is cooperating with The Stout Institute in the preparation of teachers for schools of vocational and adult education. The summer session schedule carries a strong range of courses required for vocational classification.

Refresher courses are available for teachers who have been granted emergency licenses, for teachers returning to teaching, for teachers meeting new responsibilities in added fields of work, and for men and women with practical experience desiring intensive training. Educational workshops will be continued and expanded. These will afford opportunity for individual and group work. Practical solutions of current problems will be planned in terms of immediate requirements and for new adaptations and developments.

High school graduates may begin their regular work at the beginning of the summer session. Through the use of nine weeks summer sessions high school graduates are able to complete the four year curriculum in three calendar years. Special provisions are made in the summer session for high school graduates who desire to utilize college opportunities for preparation for the armed services.

Special lectures and conferences are included in the summer session program. It has been the policy of the college to secure special speakers particularly well qualified to handle the larger social problems of the present time. Special emphasis is given to the relationships and responsibilities which home economics and industrial education teachers have in the solution of these problems.

Credit granted for courses taken during the summer session will apply on course requirements where such courses are in the curriculum leading to the degree. The time assigned to courses in the summer session is adjusted to the three week, six week, and nine week plans of operation. Teachers whose work remaining for the degree is in an amount too large to be conveniently completed through summer sessions are advised to use one or two semesters of attendance in addition to summer session attendance. In the preparation of the summer program certain courses are offered every summer while others are alternated.

Students planning to attend several summer sessions should consult advisers at the time of registration. Opportunity is offered in various courses to meet the rapid changing requirements in teaching positions.

During the last several summer sessions there has been a very marked trend toward use of the summer session as an extension opportunity for teachers in service. In the 1946 summer session flexibility in the combinations of courses will be planned to meet the varying needs on the part of teachers as they meet the new responsibilities of the present times.

The April issue of The Stout Institute Bulletin is the annual summer session bulletin. This contains general information on the summer session, descriptions of courses, and the summer session class schedule including both undergraduate and graduate work. It will be sent on request.

COURSES OF STUDY 1946-47

Industrial Education

The four-year curriculum in the division of Industrial Education at The Stout Institute leads to a degree of Bachelor of Science with a major in Industrial Education or Vocational Education and the special state license.

Supplementary licenses to teach additional subjects are based on the electives selected. The general purpose of this curriculum is to provide a balanced educational development. This balanced development is brought about through closely integrated courses in sequenced progression within the several subject groups in technical work, in English, social science, science, mathematics, and education. The specific purpose in the curriculum is to prepare the students for the requirements of the industrial education teaching and supervisory positions in elementary schools, junior high schools, senior high schools, vocational schools, junior colleges, and technical institutions. Through controlled choices in the technical and educational sequences, provision is made for licensing or certificating requirements of state departments of education. Through carefully balanced sequenced progression in academic courses, a basic preparation is provided for continued professional study on a graduate level.

The first and second years are general preparation. Students are required to take a range of work indicated in these years in the technical and other sequences. The basic exploratory range of industrial work required in the first year is supplemented by controlled choices in the second year which continue the development of a broad general foundation in this sequence.

For those students who are not journeymen or who have less than four years of apprenticeship and three years of journeyman experience in the trade, the major in industrial education is open to them. For those who have the trade experience and who are eligible for classification as vocational teachers, either the major in industrial education or the major in vocational trade and industrial education may be selected.

The tabulated material immediately following indicates the curriculum definitions for the major in industrial education. Following this information is the statement indicating the modifications in the industrial education curriculum for those who are eligible for the curriculum with the vocational trade and industrial major.

CURRICULUM IN INDUSTRIAL EDUCATION
FIRST YEAR

			Sem. Hrs.
*English	102a-b	English Composition	6
English	106	Speech I	2
*Mathematics	209	College Algebra	4
Hygiene	101	Hygiene	1
Education	123	General Psychology	3
Ind. Education	(See List)	Shop, Drawing, Design	16
Physical Education	127	Physical Education	0

*Opportunity will be provided for remedial work for those who have deficiencies.

The 16 hours of shop work and drawing in the first year consist of eight courses in the following:

IE 107	Hand Woodwork	IE 117	Printing
IE 131	Machine Woodwork	IE 119	Electrical
IE 115	Sheet Metal	IE 118	Freehand Drawing
IE 113	Machine Shop	IE 121	Ele. of Mech. Drawing

The shop work and drawing in the first year is required of all students. Recognition of incidental experiences by the students in the field of work covered by any of the courses in this group is made individually. For those entering with specific journeyman experience in trades, the freshman schedule is modified.

SECOND YEAR

			Sem. Hrs.
Chemistry	115	Inorganic Chemistry	5
Mathematics	213	Trigonometry	3
Social Science	309	General Sociology	3
Education	222	Principles of Secondary Education	2
Education	203	Plans for Instructional Material	2
Education	205	Methods of Teaching Ind. Arts	2
Education	257	Adm. and Org. of Industrial Ed. I	2
Ind. Education	(See List)	Shop, Drawing, Design	12

The 12 semester hours of shop and drawing in the second year will be selected as follows:

Three courses selected from the following in terms of the student's fields of concentration in technical work.

IE 226	General Drawing	IE 363	General Graphic Arts
IE 335	General Metal	IE 209	General Finishing
IE 116	General Woodwork	IE 369	Gen. Industrial Mechanics
IE 253	General Mechanics	IE 242	General Motor Mechanics

Three additional courses from general list in terms of fields of concentration in technical work.

The selection of technical courses in shop work, drawing, and design in the second, third, and fourth years is based upon continuous survey studies. The choices in the second year continue the exploratory range begun in the first year and include instructional experiences in typical general shops. These are selected in terms of the fields of concentration which the individual student plans to develop in his technical work. The selections of technical courses in the third and fourth year are based upon the experiences of the student in the first and second years, a detailed study of the trends in educational requirements as evidenced in the distribution in calls for teachers, and continuous survey studies of technological, structural, and functional change in modern industry. The implications of the results of these studies are used in teacher training to meet the requirements for general education and for vocational education. Selections of courses are combinations made from the following:

Aircraft Construction	General Finishing
Carpentry	Painting and Decorating
Cabinetmaking	Oxy-acetylene & Electric Welding
Patternmaking	Sheet Metal
Woodturning	Machine Shop
Furniture Upholstery	Architectural Drawing
General Woodwork	Aircraft Drawing
Freehand Drawing	Foundry
Machine Drawing	General Metal
General Drawing	General Graphic Arts
Mechanical Drawing	Printing
General Mechanics	Masonry
General Industrial Mechanics	General Building Construction
Industrial Mechanics	House Furnishing
General Motor Mechanics	Electrical Work
Auto Mechanics	Radio

Those who wish technical courses in shopwork, drawing, or design for preparation for technical or junior executive positions in industry will find selections from the technical courses particularly applicable.

Those who desire to take special selections of work in English, Mathematics, Science, Social Science, or Education for the purpose of transferring these credits to other colleges to apply on other curricula will find advantageous combinations of work for as much as two years of attendance.

THIRD YEAR

			Sem. Hrs.
English	346	Expository Writing	3
English	223	Speech II	2
Physics	421	Physics I	5
Social Science	201	General Economics	3
Social Science	311	Government	3
Education	303	Educational Psychology	2
Education	357	Adm. & Org. of Ind. Ed. II	2
Education	408b	Student Teaching	2
Education	408a	Observation	1
General Electives			4
Industrial Ed.	(See List)	Shop, Drawing, Design	6

FOURTH YEAR

			Sem. Hrs.
Additional Science			3
Additional Social Science			4
General Electives			7
Education Electives			6
Education	408c	Student Teaching	2
Industrial Ed.	(See List)	Shop, Drawing, Design	10

Electives

Supplementary licenses to teach subjects in addition to industrial subjects are based on electives selected. In addition to the major in industrial education, students are required to arrange their selections of electives to complete two academic minors. Fifteen semester hours of work in a given subject matter field constitute a minor.

Education Electives

Adolescent Psychology	2
Visual Education	2
*Vocational Guidance	2
Statistics	2
Educational Measurements	2
Theory and Organization of the General Shop	2

*Philosophy of Vocational and Adult Education	2
*Teaching Trade and Industrial Subjects	2
Psychology of Personality and Mental Hygiene	2
Psychology of Counseling and Guidance	2
*Problems in Teaching Trade and Industrial Subjects	2

(*See Wisconsin State Board of Vocational and Adult Educational classification requirements.)

General Electives

English

Students desiring to complete an English minor should select courses from the following group in sufficient amount to complete fifteen semester hours in English, counting English courses included in the required group.

Fiction	2
Drama	2
Poetry	2
Play Production	2
Survey of English Literature	2
Survey of American Literature	2
Speech III	2

History and Social Science

Students desiring to complete a social science minor should select courses from the following group in sufficent amount to complete fifteen semester hours in social science, counting social science courses included in the required groups.

Recent U. S. History	3
Labor Problems	3
American Politics	2-3
History of the Americas	4
Modern World	4
Social Problems	3

Science

Students desiring to complete a science minor should select from the following group in sufficient amount to complete fifteen semester hours in science, counting science courses included in the required group.

Physics II	3
Physics III	3
Physics IV	3
Chemistry III (Chemistry of materials)	3
Organic Chemistry	4
Biology	3
Bacteriology	3
Physiology	3
Meteorology	3
Zoology	2

Mathematics

Students desiring to complete a mathematics minor should select courses from the following group in sufficient amount to complete fifteen semester hours in mathematics, counting mathematics courses included in the required groups.

Spherical Trigonometry	2
Analytic Geometry	2
Calculus	4
Elements of Navigation	2

Music

A maximum of two semester hours of music may be included in the academic electives to count toward graduation requirements.

Solfeggio	1
Harmony Ia	1
Harmony Ib	1
Introduction to and appreciation of music	1
Theory	1
Conducting	1
Men's Glee Club	1
Band	1
Orchestra	1

Coaching

Techniques of Coaching Football	1½
Techniques of Coaching Basketball	1½

COOPERATIVE WORK

An expanding program of opportunity for cooperative work for students in the Division of Industrial Education is being developed. This work is of two types, teaching and shop experience. In the supervised teaching which all students must take in the professional group, opportunity is offered at The Stout Institute for such teaching in grades 7 to 12 in the Menomonie Public Schools and in the classes of the Menomonie School of Vocational and Adult Education. Through special arrangements teaching experience in certain other types of schools outside of Menomonie is available for a limited number of students. Through these opportunities, in addition to those on the campus, all types of teaching positions open to Stout graduates are available for supervised teaching during the training period.

All students in the division of Industrial Education select certain concentrations of work in their technical sequence in shop work, drawing, and design. From time to time opportunities are available for advanced students to spend some time in certain selected industrial establishments securing practical production experience. Constant effort is maintained to keep such opportunities available in establishments representing the various content areas included in the technical sequence. The purpose of such work is to give the students modern industrial experience to extend the training experiences secured on the campus. For students who come to The Stout Institute after having already attained sufficient journeyman experience in a trade, the opportunities for the vocational major are available.

VOCATIONAL TRADE AND INDUSTRIAL EDUCATION MAJOR

Students interested in trade and industrial education teaching and who wish to select the vocational major, must be eligible for vocational teaching classification upon graduation. Ordinarily this vocational

classification will be based on four years of apprenticeship and three years of journeyman experience or the equivalent thereof in terms of occupational definition. Students who are not eligible for vocational classification upon graduation will not be eligible for the curriculum leading to the vocational major.

The proportioning and distribution of academic, education and technical courses (shop, drawing and design) will be similar to that in the industrial education curriculum. In the education sequence the amount of credit will be the same as in the industrial education curriculum. The vocational education classification courses will be required. Where necessary these courses will be used in substitution for courses now in the education sequence. These courses referred to as classification courses are the following:

Philosophy of Vocational and Adult Education
Teaching Trade and Industrial Subjects
Educational Psychology
Vocational Guidance
Problems in Teaching Trade and Industrial Subjects

Trade experience credit examinations will be arranged to permit candidates for the undergraduate trade and industrial vocational major to earn through examinations up to a maximum of twenty-four semester hours of credit in the total required for the degree of Bachelor of Science. This credit will be available in six semester hour amounts at certain stated periods in the student's progress through the other credits earned through residence work. In the schedule listed below the plan and the rate at which the twenty-four semester hours of trade examination credit become available is indicated.

Trade and Industrial Education Vocational Major (128 Semester Hours)

When	32	Sem. Hrs. residence completed	6 Sem. Hrs. Credit on trade experience examination released.
When	32	(additional)	6 (additional)
When	32	(additional)	6 (additional)
When	8	(additional)	6 (additional)
	104		24
			128

The credit and grade point requirements for the residence work will be the same as those for the industrial major. For graduation it will be necessary for the students to have as many grade points as semester hours of residence credit.

In conducting the examinations based on trade experience, use will be made of advisory committees to assist The Stout Institute in the formulation and conducting of examinations. These advisory committees will include representatives of the State Board of Vocational and Adult Education, employers in the trade in which the candidate is being examined, employees in the same trade, and the teacher training committee of the Wisconsin Vocational Directors' Association. The examinations will be conducted at The Stout Institute and will include oral, written and performance sections. In the field conferences in connection with the preparation and development of these examinations, The Stout Institute will have the assistance of the State Board of Vocational and Adult Education. In the conducting of these examinations, the major portion

of the written and performance parts of the examination will be completed before the committee meets at The Stout Institute. At the time of the oral examination, the results of the written and performance portions of the examination will be checked. The candidate will be required to meet a reasonable fee charge for the examination, such fee to be used in meeting the expenses incurred in connection with the examination.

The work outlined for the curriculum for the vocational major is closely articulated with classification requirements of the Wisconsin State Board of Vocational and Adult Education.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION CLASSIFICATION REQUIREMENTS

Under section 41.15 (6) of the Wisconsin Statutes the State Board of Vocational and Adult Education has set up certain standards of practical occupational experience, teaching experience in schools of vocational and adult education, general education training, and specific professional preparation for teachers in the Wisconsin schools of vocational and adult education and is classifying such teachers on the basis of these standards.

Teachers of Trade and Industrial Subjects
Junior Classification

Junior Classification is granted to and held by:

A. All teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—

Outside of Milwaukee prior to January 1, 1926.

In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. If not already with a record of practical experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience, spend one summer, or the equivalent, during each three year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A classification and approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. At least six credits must be earned over each three year period. The following courses must be taken first:

   Philosophy of Vocational and Adult Education .... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits

   Note: Three year periods mentioned above are those ending as of August 31, 1947—1950—1953—etc.

B. All teachers of trade and industrial subjects in the Wisconsin

schools of vocational and adult education employed—
Outside of Milwaukee on or after January 1, 1926.
In Milwaukee on or after March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. Have had practical experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience. Or have had practical experience, in the vocation taught for at least one and a half years beyond the completion of apprenticeship, or the equivalent experience, and have agreed to and actually do spend one summer, or the equivalent, during each two year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Have agreed to and actually do spend one summer, or the equivalent, during each two year period in professional improvement along the lines laid down for securing Senior A classification and approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. At least six credits must be earned over each two year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education .... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits

   Note: Two year periods mentioned above are those ending with the second August 31st after the teacher enters upon his work in the school of vocational and adult education and all subsequent two year periods.

Senior B Classification

Senior B Classification is granted to all teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee prior to January 1, 1926.
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold Senior A Classification.
2. Have completed five years of successful teaching of the trade and industrial subjects indicated in the Wisconsin schools of vocational and adult education.
3. Have completed one summer, or the equivalent, in professional improvement. At least six credits must be earned in courses approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. The following courses must be taken first:
   Philosophy of Vocational and Adult Education .... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits

Senior B Classification will be extended as long as the possessor:

1. Teaches the trade and industrial subject indicated successfully in the Wisconsin schools of vocational and adult education.
2. If not already with a record of practical experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience, spends one summer, or the equivalent, during each three year period in practical work in the trade or occupation indicated until such record shall total three full years.

3. Has agreed to and actually does spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education. At least six credits must be earned over each three year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education.... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1947—1950—1953—etc.

Senior A Classification

Senior A Classification is granted to and held by all teachers of trade and industrial subjects who meet the following requirements:

1. Practical experience in the vocation taught for at least three years beyond the completion of apprenticship, or the equivalent experience.
2. Successful teaching experience of trade and industrial subjects indicated for not less than three full years in schools of vocational and adult education; one of these three years must be in Wisconsin.
3. Completion of two years of college work in an approved teacher training institution, or the equivalent training.

   Note: Time spent by a person without practical experience in a trade school or technical school learning elementary processes, if applied on the apprenticeship period mentioned above, cannot be counted here. This two years of school training is to be in addition to the learning of the elementary trade or industrial processes.

4. Completion of the following courses, which may be included in the two years of college training required (under 3) above, or the equivalent specific training:
   (1) Philosophy of Vocational and Adult Education ..... 2 credits
   (2) Teaching Trade and Industrial Subjects.... 2 credits
   (3) Educational Psychology ..... 2 credits
   (4) Vocational Guidance ..... 2 credits
   *(5) Problems in Teaching Trade and Industrial Subjects ..... 2 credits
   (6) Elementary Economics ..... 4 credits
   (7) Socio-economic Electives ..... 4 credits

   *This course cannot be taken for classification credit until the teacher has a record of three years experience in schools of vocational and adult education.

   Note: Four credits of graduate work done by a candidate for a higher degree is accepted in lieu of the six credits total required throughout these standards.

Unclassified

All teachers of trade and industrial subjects who do not have the qualifications for any of the ranks of classification as herein set up shall be designated as Unclassified.

Home Economics

The field of Home Economics is concerned with problems of home and family life and its studies are based upon an understanding of social, biological, and physical sciences and the humanities. This curriculum at The Stout Institute has been developed through the cooperative thinking and selection by faculty and students of four areas of experience needed in modern living. In each of the four years, one of these areas has been chosen as a basis for achieving the desired goals. The area of personal development is the center of interest for the freshmen year, that of family relationships the determining factor for the sophomore year, social-civic relations for the junior year, and professional relations for the senior year of work. Although the cumulative development of each year relates more to the one area than to the others, giving a unity of experiences, the interdependence of all areas is also emphasized. The experiences through which the students attack their problems vary with circumstances and with the needs of the particular person.

The offerings in the Division of Home Economics are planned to meet student needs in family and community living and to offer a worthwhile training in the many professional fields open to home economists. Graduates of this college are prepared to fill positions in the teaching field, in hospital dietetics, institutional management, commercial demonstration work, in service with the Farm Security Administration and with the Agricultural Extension Service.

The curriculum in this division meets the requirements for the degree of Bachelor of Science in Home Economics. It also permits the meeting of requirements for teacher's licenses and those of the American Dietetics Association for dietitians and employees in institutions. Students may complete requirements for graduation through choice in Home Economics Education, Dietetics, Institutional Management, or a general Home Economics sequence of courses. In the latter group special selections may be made in Foods, Clothing or Child Development.

CURRICULUM IN HOME ECONOMICS

First Year

	Sem. Hrs.
English 102a-b—English Composition	6
English 106—Speech I	2
Biology 214—Physiology and Anatomy	5
Education 123—General Psychology	3
Home Economics 116—Personal Development	2
Home Economics 102—Clothing	3
Home Economics 112—Principles of Nutrition	2
Home Economics 114—Food Preparation	2
Art 106—Fundamentals of Design	3
Art 220—Clothing Selection	2
Physical Education 128	0

Second Year

English 216—Survey of English Literature or English 346—Expository Writing	2-3
Chemistry 115—Inorganic	5
Chemistry 208—Organic	4

Social Science 309—Sociology	3
Home Economics 212—Family Nutrition	3
Home Economics 230—Foods	3
Home Economics 224—Growth and Development of The Child	2
Home Economics 315—Textiles	3
Home Economics 218—Clothing Construction	3
Art 334—House Furnishing	3
Physical Education 228	0

Note: 1. Chemistry 208 must precede or parallel Home Economics 212.
2. Home Economics Education students should register in Education 222 during the second semester of the Sophomore year or first semester of the Junior year.
3. Dietetics students will schedule Bact. 206 and need not schedule Art 334, HE 315, HE 218 unless desired.
4. Institution Management students will schedule Bact. 206 and need not schedule Art 334, HE 218 unless desired.

A. Home Economics Education

Third Year

English 216—Survey of English Literature or English 346—Expository Writing	2-3
Social Science 201—Economics	3
Social Science 320—Problems of Family	3
Education 320—Methods and Evaluation of Home Economics Education	3
Education 222—Principles of Secondary Education	2
Home Economics 317—Consumer Information	3
Home Economics 308—Meal Management	3
Home Economics 403—Home Management	3
Electives	
Home Economics	4-6
Academic	4-6

Fourth Year

Biology 442—Community Hygiene	2-3
Social Science 410—Modern world	4
or	
Social Science 407—History of America	4
or	
Social Science 311—Government	3
Education 303—Educational Psychology	2
Education 410—Curriculum and Administration of Home Economics Education	3
Education 408—Student Teaching	6
Home Economics 424—Principles and Practices of Child Guidance	2
Electives	
Home Economics	4-6
Academic	4-6

Note: Home Economics Education students interested in teaching positions in George Deen or City Vocational schools should elect Ed. 402 and Ed. 413.

B. Dietetics

Third Year

Chemistry 322—Biochemistry	3
Biology 362—Advanced Physiology	3

Education 303—Educational Psychology 2
Social Science 201—Economics 3
Home Economics 308—Meal Management 3
Home Economics 310—Nutrition and Dietetics 3
Home Economics 452—Institution Food Preparation 3

Electives

Home Economics 6
Academic 6

Fourth Year

Social Science 326—Problems of Family 3
Education 320—Methods and Evaluation in Home Economics Education 3
Home Economics 328—Institution Administration 3
Home Economics 418—Diet in Disease 3
Home Economics 403—Home Management 3
Home Economics 438—Experimental Foods 3

Electives

Home Economics 6
Academic 8

Note: Dietitians interested in administrative work should elect Social Science 414 and Home Economics 463 and Home Economics 317.

C. Institution Management

Third Year

Social Science 201—Economics 3
Social Science 326—Problems of Family 3
Education 303—Educational Psychology 2
Home Economics 300—Applied Institution Management 3
Home Economics 308—Meal Management 3
Home Economics 317—Consumer Information 3
Home Economics 403—Home Management 3
Home Economics 452—Institution Food Preparation 3

Electives

Home Economics 4
Academic 6

Fourth Year

Biology 442—Community Hygiene 2-3
Social Science 414—Labor Problems 3
Education 320—Methods and Evaluation in Home Economics Education 3
Home Economics 328—Institution Administration 3
Home Economics 463—Institution Management Problems 3
Home Economics 438—Experimental Foods 3

Electives

Home Economics 6
Academic 6

Note: Institution Management students interested in administrative internships should elect Chemistry 322 and Home Economics 310.

D. General Home Economics

Third Year

English 216—Survey of English Literature or English 346—Expository Writing 2-3
Social Science 201—Economics 3
Home Economics 308—Meal Management 3
Home Economics 424—Guidance Practices with Pre-School Children 2
Home Economics 317—Consumer's Information 3
Art 206—Art Appreciation 2

Choice

Foods (Home Economics 438—Experimental Foods 3
(Home Economics 400—Food Demonstrations 2
or
Clothing (Home Economics 322—Textile Problems 2-3
(Home Economics 320—Adv. Clothing Construction 2-3
or
Child Development (Education 352—Child Psychology 2
(Home Economics 318—Family Health 2
(Education 421—Nursery School Organization 3-4

Electives

Home Economics 5
Academic 5

Fourth Year

Social Science 326—Problems of Family 3
Social Science 410—Modern World 4
or
Social Science 407—History of Americas 4
or
Social Science 311—Government 3
Biology 422—Community Hygiene 2-3
Home Economics 403—Home Management 3

Choice

Food (Home Economics 456—Special Food problems 3-4
(Home Economics 300—Applied Institutional Management 3
or
Clothing (Home Economics 312—Applied Dress Design 2-3
(Home Economics 316—Clothing Economics 2-3
or
Child Development (Education 408 N.S.—Teaching in The Nursery School 3-6
(Biology 432—Heredity and Eugenics 2-3

Electives

Home Economics 6
Academic 6

ELECTIVES

In addition to the requirements for a major in Home Economics, students must arrange their choices of electives to complete two academic minors. Fifteen semester hours in courses of a particular subject matter field constitutes a minor.

Students may also choose electives in subject matter fields of their special interests and needs, to complete the total number of hours required.

	Sem. Hrs.
Education	
Education 350—Adolescent Psychology	2
Education 352—Child Psychology	2
Education 447— Psychology of Personality and Mental Hygiene	2
Education 449—Psychology of Counseling and Guidance	2
Education 441—Educational Measurements	2
Education 461—Statistics	2
Education 360—Visual Education	2
Education 401—Vocational and Educational Guidance	2
Education 402—Philosophy of Vocational and Adult Education	2
Education 413—Vocational and Adult Homemaking	2
Education 416—Problems in Teaching Vocational and Adult Homemaking	2
English	
English 406—Drama	2
English 402—Fiction	2
English 444—Play Production	2
English 404—Poetry	2
English 223—Speech II	2
English 348—Survey of American Literature	2
English 320—Speech III	2
Science and Mathematics	
Bacteriology 206—General Bacteriology	3
Chemistry 322—Biochemistry	3
Biology 122—General Biology	3
Biology 362—Advanced Physiology	2-3
Biology 442—Community Hygiene	2-3
Biology 432—Heredity and Eugenics	2-3
Physics 421—Physics I	5
Physics 423—Physics II	3
Biology 316—Zoology	2
Social Studies	
Social Science 417—American Politics	2-3
Social Science 301—Economic History of the U. S.	3
Social Science 311—Government	3
Social Science 407—History of the Americas	4
Social Science 414—Labor Movements	3
Social Science 410—Modern World	4
Social Science 215—Origins and History of World War II	2-3
Social Science 409—Recent U. S. History	3
Social Science 411—Social Problems	2-3
Music	
(Maximum of two semester hours may be included in academic electives to count toward graduation.)	
Music 150—Solfeggio	1
Music 151—Harmony Ia	1
Music 152—Harmony Ib	1

Music 153—Introduction to and Appreciation of Music	1
Music 160—Theory	1
Music 162—Conducting	1
Music 165—Women's Glee Club	1
Music 166—Band	1
Music 167—Orchestra	1
Home Economics	
Art 206—Art Appreciation	2
Art 430—Art History	2
Art 332—Advanced Design	2
Art 400—Crafts	2-3
Art 460—Advanced Crafts	2-3
Art 323—Problems in House Furnishing	2
Art 446—Sketch	1
Art 436—Clothing Design	2
Art 410—Pottery	2
Home Economics 244—Weaving	2
Home Economics 438—Experimental Foods	3
Home Economics 456—Special Food Problems	3-4
Home Economics 400—Food Demonstrations	2
Home Economics 300—Applied Institution Management	3
Home Economics 452—Institution Foods	3
Home Economics 328—Institution Administration	3
Home Economics 310—Nutrition and Dietetics	3
Home Economics 333—Household Equipment	2
Home Economics 352—Housing	2
Home Economics 318—Family Health	2
Home Economics 312—Applied Dress Design	2-3
Home Economics 314—Children's Clothing	2
Home Economics 316—Clothing Economics	2-3
Home Economics 320—Advanced Clothing Construction	2-3
Home Economics 336—Clothing Problems	2
Home Economics 370—History of Costume	2
Home Economics 322—Textile Problems	2-3

Vocational Homemaking Education Major

Women students interested in the vocational education major must be eligible for vocational teaching classification upon graduation.

The distribution of the courses required for a major in this division will be very similar to that in the curriculum of the home economics division. The academic and education courses will be distributed as they are in that curriculum. The vocational courses required will be:

Philosophy of Vocational and Adult Education
Teaching Vocational and Adult Homemaking
Educational Psychology
Vocational Guidance
Problems in Teaching Vocational and Adult Homemaking

Technical courses will be taken from the list required in home economics, such requirements, however, to be modified to fit the particular needs of the individual student.

Credit examinations in technical courses in which the candidate has had teaching or trade experience will be allowed up to a maximum of 24 semester hours. Such credit will be released in units of six semester hours at the completion of each 32 semester hours of resident class work.

The method for conducting such examinations will be similar to that set up for the men majoring in the vocational trade and industrial courses. (See Page 32)

The total amount of credit required for this major will be 128 semester hours, with grade point requirements equalling the semester hours of credit.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION CLASSIFICATION REQUIREMENTS

Under Section 41.15 (6) of the Wisconsin Statutes the State Board of Vocational and Adult Education has set up certain standards of practical occupational experience, teaching experience in schools of vocational and adult education, general educational training, and specific professional preparation for teachers in the Wisconsin schools of vocational and adult education, and is classifying such teachers on the basis of these standards.

Teachers of Homemaking

Junior Classification

Junior Classification is granted to and held by:

A. All teachers of homemaking in the Wisconsin schools of vocational and adult education employed—

Outside of Milwaukee prior to January 1, 1926
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. If not already with a record of practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience, spend one summer, or the equivalent, during each three year period in practical homemaking until such record shall total twelve months.
3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each three year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education .... 2 credits
   Teaching Vocational and Adult Homemaking ..... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1947-1950-1953, etc.

B. All teachers of homemaking in the Wisconsin schools of vocational and adult education employed—

Outside of Milwaukee on or after January 1, 1926
In Milwaukee on or after March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. Have had practical experience in homemaking involving some responsibility for at least twelve months, or the equivalent experience. Or have had such practical homemaking experience for at least six months, or the equivalent experience, and have agreed to and actually do spend one summer, or the equivalent, during each two year period in such practical homemaking until such record shall total twelve full months.

3. Have completed two years of home economics course in an approved teacher training institution of college rank, or the equivalent training.
4. Have agreed to and actually do spend one summer, or the equivalent, during each two year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each two year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education .... 2 credits
   Teaching Vocational and Adult Homemaking ..... 2 credits
   Note: Two year periods mentioned above are those ending with the second August 31st after the teacher enters upon her work in the school of vocational and adult education and all subsequent two year periods.

Senior B Classification

Senior B Classification is granted to all teachers of homemaking in the Wisconsin Schools of vocational and adult education employed—

Outside of Milwaukee prior to January 1, 1926
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold Senior A Classification.
2. Have completed five years of successful teaching of homemaking in the Wisconsin schools of vocational and adult education.
3. Have completed one summer, or the equivalent, in professional improvement. At least six credits must be earned including the following courses:
   Philosopsy of Vocational and Adult Education .. 2 credits
   Teaching Vocational and Adult Homemaking ..... 2 credits

Senior B Classification will be extended as long as the possessor:

1. Teaches homemaking successfully in the Wisconsin schools of vocational and adult education.
2. If not already with a record of practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience, spends one summer, or the equivalent, during each three year period in practical homemaking until such record shall total twelve full months.
3. Has agreed to and actually does spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each three year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Homemaking 2 credits
   Teaching Vocational and Adult Homemaking ..... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1947-1950-1953, etc.

Senior A Classification

Senior A Classification is granted to and held by all teachers of homemaking who meet the following requirements:

1. Practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience.

Note: Practical experience in homemaking involving some degree of responsibility is considered to be:

a. Experience with entire responsibility for all homemaking activities such as would be the case were the housewife to be away or ill or the mother to die, leaving full responsibility to be assumed by the candidate.

b. Experience as an employee in the home, responsible for certain homemaking activities such as would be the case where the candidate works with and assists the housewife but usually has delegated or assumes responsibilities for definite activities.

2. Occupational experience in fields other than teaching or homemaking for at least three months, or the equivalent experience.
3. Successful teaching experience in homemaking for not less than three full years in schools of vocational and adult education; one of these three years must be in Wisconsin.
4. Completion of a four year college course with a home economics major in an approved teacher training institution, or the equivalent training.
5. Completion of the following courses, which may be included in the four years of college training required (under 4) above, or the equivalent specific training:

(1) Philosophy of Vocational and Adult Education	2 credits
(2) Teaching Vocational and Adult Homemaking	2 credits
(3) Educational Psychology	2 credits
(4) Vocational Guidance	2 credits
*(5) Problems in Teaching Vocational and Adult Homemaking	2 credits
(6) Elementary Economics	4 credits
(7) Socio-economic Electives	4 credits

*This course cannot be taken for classification credit until the teacher has a record of three years experience in the schools of vocational and adult education.

Note: Four credits of graduate work done by a candidate for a higher degree is accepted in lieu of the six credit total required throughout these standards.

Unclassified

All teachers of vocational homemaking who do not have the qualifications for any of the ranks of classification as herein set up shall be designated as Unclassified.

DESCRIPTION OF COURSES

Psychology, Education, Liberal Arts

PSYCHOLOGY

Education 123 General Psychology

Scientific vs unscientific approaches in understanding man. Course treats efficient methods in study, individual differences and their measurement, development of motives, emotions and their dynamics, behavior and personality development attention and thinking. Consideration given to special psychological problems of college and community life.

Sem. I, II. Credit: 3
Oetting

Education 303 Educational Psychology

Prerequisite: Education 123 General Psychology.

A course parallel to practice teaching and closely knit with its needs. Content covers individualization in learning, control of procedures in establishing proper motivation, comparison of methods in teaching, memory, forgetting, discipline, learning of skills, and the special problems introduced by varied biological and psychological backgrounds.

Sem. I, II. Credit: 2
Oetting

Education 350 Adolescent Psychology

Prerequisite: Psychology 123.

A comprehensive study of adolescent years, embracing the physical, emotional, social, moral and intellectual developments of the adolescent. An attempt is made to derive theory from only objectively proven facts and to give much practice in applying it to the practical problems of the home, school, and community.

Sem. II. Credit: 2
Oetting

Education 352 Child Psychology

Prerequisite: General Psychology.

Child Psychology is offered to aid in interpreting and controlling the psychological development of children. Concentration of emphasis will be placed on age groups spanning the nursery school and the pre-pubescent child. Methods for scientific measurement and prediction of child-behavior will be included.

Sem. I. Credit: 2
Oetting

Education 447 Psychology of Personality and Mental Hygiene

Prerequisite: Psychology 123, General Psychology or equivalent.

A course designed to give the student an understanding of himself and a basis for self improvement. Practical procedures will be outlined for the removal of objectional habit systems and the development of pleasant personalities, poise, emotional stability and socially desirable attitudes.

SS Credit: 2
Oetting

Education 449 Psychology of Counseling and Guidance

Prerequisites: Psychology 123, General Psychology or equivalent.

The technique of selecting ultimate aims in life and directing individuals into proper channels. Course involves predicting and controlling behavior of self and others, precise methods of trait measurement and modern procedures for capitalizing upon one's potentialities. Supervised practice in counseling and guidance will be offered, with special emphasis on methods of creating friendly cooperaton between the counselor and the counselee.

SS Credit: 2
Oetting

EDUCATION

Education 203 Plans for Instructional Material

Prerequisite: 12 Sem. Hrs. in Shop and Drawing Work.

Factors underlying the appropriate selection and preparation of instructional material in the industrial arts field, with the development of plans for effective presentation. Selected types of work prepared in a series of consecutive units for typical teaching situations. Unit analysis, preparation of instruction sheets, teaching plans.

Sem. I, II. Credit: 3
Brown

Education 222 Principles of Secondary Education

A total view of education with emphasis upon the secondary school and the practical arts. Course embraces the historical aspect, current world practices, articulation between educational systems with a detailed study of the purpose of each, the broad aims of education and the specific aims of the practical arts, local and state problems of finance, and methods of appraisal of results of teaching. Out-of-class contact with secondary schools and secondary school students a requirement.
Credit: 2
Sem. I, II.
Oetting

Education 320 Methods and Evaluation in Home Economics Education

Prerequisite: Psychology 303, or parallel.

Educational values of home economics. Methods of classroom teaching. Provision for individual differences. Evaluation of results of instruction. Observation of junior and senior high school classes in the study of all aspects of home economics.
Credit: 3
Sem. I, II.
Moore

Education 410 Curriculum and Administration of Home Economics Education

Prerequisites: Education 209, 320.

Place of home economics in general education. Development of home economics curriculum in all day schools. Administration of the homemaking department. Professional development of the teacher.
Credit: 3
Sem. I, II.
Moore

Education 451 Measurements in Home Economics

Prerequisites: Graduate or advanced undergraduate standing.

Emphasis will be placed upon evaluating the total behavior of the student, together with such techniques as are available for the interpretation of these results. Study and preparation of devices for evaluating ability and achievement in home economics.
Credit: 2
SS

Education 508 Curriculum Studies in Home Economics

Prerequisite: Graduate Standing.

A review of recent investigations of educational programs, of experimentation in organizing home economics material in accordance with the modern philosophy of education, and of the relation of these studies to an integrated curriculum. Constructive work in setting up goals and planning courses of study for various types of schools.
Credit: 2-4
SS

Education 257 Administration and Organization of Industrial Education I

Prerequisite: Sophomore standing in education sequence.

Procedures in occupational and administrative factors which control the identification, interpretation and arrangement of industrial content for educational use.
Credit: 2
Sem. I, II.
Bowman

Education 357 Administration and Organization of Industrial Education II

Prerequisite: Education 257 and junior standing in education sequence.

Definition of teacher's professional skill in analysis, selection, and teaching on the lesson level, subject level, and curriculum level with solutions of typical problems. Administrative practice analyzed in functional assignment of school operating responsibility; measurement of teaching and supervisory staffs; maintaining and developing the teacher's professional skill; functioning of the school system through continuous survey; the school budget and financial control; maintaining and controling of buildings and equipment.
Credit: 2
Sem. I, II.
Bowman

Education 360 Visual Education

Prerequisite: Junior standing in Education.

The development of visual instruction and its uses in industry, commerce and general education. Special emphasis on visual instruction in the practical arts. Actual experience and participation in the constuction of typical visual aids and in planning and presentation of lessons aided by visual means. Proficiency developed in operating, adjusting and servicing typical projectors. Practice in locating, ordering and handling visual aids obtained from outside sources. Administrative phases of visual education program, service or center in a school system.
Credit: 2
Sem. II.
Nelson

Industrial Education 560 Visual Education II Experiments in Visual Education

Prerequisite: Education 360.

Each experiment is selected on the basis of the individual's needs and interests, on his previous experience and on the educational value of the project. Some of the typical fields for experimentation are: Development of new methods, devices, and applications, refinement of previous discoveries and improved uses of visual aids. Determination of educational values of specific visual aids and of methods used in visual instruction. Comparisons and tests of apparatus and equipment, to determine efficiency, durability, and convenience. A report is required, written in approved form, to cover such details as the purpose of the experiment, methods employed, sources used, and results obtained.
Credit: 2
S. S. only
Nelson

Education 444 Workshop in Clothing

The present situations have created many clothing problems due to textile shortages, reduced man power, and limited machines; all of which have contributed to the production of civilian clothing. Therefore, changes in subject matter, processes and methods of teaching are imperative. The clothing workshop is designed for those people who are interested in doing intensive work in some clothing problems such as a study evaluation in the teaching of clothing, conservation of clothing to meet shortages, sewing machine clinic, new use of foundation patterns and many others.
SS
Credit: 2-4

Education 445 Workshop in Foods

The importance of foods to the health of all people makes the question of distribution and utilization of such commodities everyone's responsibility, and the solving of such problems offer many new complications to those teaching in this field. Studies in the workshop will be concerned with such problems as preservation of foods, right cooking to preserve nutrient values, meal planning, the use of food alternates, the use of rationed foods and others. New teaching skills may have to be developed in the expanded use of the demonstration method and in the use of current reference materials. Members of the group will develop subject matter, manipulative processes, and other techniques which will meet their specific needs.
SS
Credit: 2-4

Education 205 Methods of Teaching Industrial Arts

Prerequisite: Education 203.

Techniques employed in analysis and organization of units for the different levels of instruction, the development of pupil-purpose progress charts, factors underlying personnel organization and shop management; construction of tests and rating scales for evaluation. Methods applied to specific teaching situations.
Sem. I, II.
Credit: 2
Brown

Education 408a Observation (Industrial Education)

Prerequisites: Education 203, Education 357b.

Observation is an integrated course planned for pre-service student teachers. Professional and technical course content is integrated with the teaching of industrial arts. Directed observation of the following types of industrial arts programs: Comprehensive General Shops, Unit General Shops, and Unit Shops. Graded student teaching participation is a part of the program.
Sem. I, II.
Credit: 1
Wigen

Education 408b Student Teaching (Industrial Education)

Prerequisites: Education 203, Education 357b, Education 408a.

Student teaching opportunities are provided for the junior and senior high school levels of education the major areas of the Industrial Arts program. Opportunities are available for student teachers to acquire experience in several types of Industrial Arts shops: the Comprehensive General Shop, Unit General Shop, and the Unit Shop. Individual conferences with the Critic Supervisor and group conferences with the Supervisor of Student Teaching.
Sem. I, II.
Credit: 4-6
Wigen

Education 408 Student Teaching in Home Economics

Prerequisites: Education 123, 320.

Induction into teaching through observation and participation, gradually working into the varied activities and responsibilities of a teacher of home economics.

Teachers participate as completely as possible in the entire educational program and in the life of the community. Experience is available in either on or off campus teaching centers.
Sem. I, II. Credit: 6
Moore, Harper, Schwebke

Note:
The State Board of Vocational and Adult Education has made it possible for senior students in home economics education to secure experience in the following cooperating schools:
LaCrosse School of Vocational and Adult Education: Mr. John B. Coleman, Director, Mrs. Katherine Schultz, Miss Eleanor Vergin, Supervising Teachers of Homemaking.
Dunn County School of Agriculture: Miss Clara Moeschler, Superintendent, Miss Margaret Gibson, Supervising Teacher of Homemaking.
Mondovi High School: Mr. C. L. Dodge, Superintendent, Mrs. Jane Rosenthal, Supervising Teacher of Homemaking.
Durand High School: Mr. Glenn A. Hart, Superintendent and Mrs. Virginia Hansen, Supervising Teacher of Homemaking.

Education 408 (N S.) Teaching in the Nursery School.

Prerequisite: Education 421.

Students will be given opportunity, under supervision, to gradually assume the full responsibility of a nursery school teacher in the Stout Institute Nursery School.
Credit: 3-6
Sem I, II.
Smith

Education 441 Educational Measurements

Prerequisites: Education 203 and 222, or Education 320.

Improvement of the written examination with special references to validity, reliability, and objectivity. The course includes the present status, types, selection, characteristics, limitations, possibilities, use and interpretation of tests, as well as the conversion of raw scores and the distribution for the determination of grades. Emphasis is placed on the construction of informal objective tests so that the student may construct and use same when in the field.
Credit: 2
Sem. I, II.
Brown

Education 461 Statistics

Prerequisite: Senior Standing.

Includes method of collecting, evaluating and recording statistical facts pertinent for the interpretation of data and the technique of drawing conclusions.
Credit: 2
Sem. I, Alternate years.
Rich

Education 480 Theory and Organization of General Shop

Prerequisites: Senior Standing (Junior Standing permissible if student has senior standing in educational sequence.)

The history of the general shop, including an analysis of the educational considerations, the identifications of all types of general shops with a study of each to include pupil classifications of boys and girls, equipment combinations, shop operating problems, including those of personal organization, stock room and store room organization and operation. Direct observation in the several types of general shops in The Stout Institute and assignments as assistants in student teaching practice classes in selected general shops. The identification of instructional methods, teaching devices, and preparation procedures in preparing instructional material. Identification of related information, classifications, and sources.
Credit: 2
Sem. I, II.
Bowman, Brown

Note: Men who have completed the requirements in student teaching and the above course, will be permitted, so far as facilities allow, to take additional two hours of student teaching in general shop work in the senior year and substitute this for two semester hours of technical work in shop work, drawing or design.

Education 402 Philosophy of Vocational and Adult Education

A general acquaintance course in the philosophy, organization, and administration of vocational and adult education for the out-of-school group. Emphasis is placed upon the history and development of the vocational school in the nation, with special attention given to the Wisconsin plan; federal and state laws affecting vocational needs, interests and abilities; desirable characteristics of the vocational school teacher; coordination; cooperation with the Industrial Commission and the Rehabilitation Division.
Sem. II, and S. S. Credit: 2
Johnson and others.

Education 401 Vocational and Education Guidance

The rise and development of the movement, with some attention to foreign progress; study of surveys and their application to the problem; analysis and evaluation of the use of intelligence and trade tests; careful considerations of personal functions and administration, in education, business, and industry; and preparation and classification of occupational information for use in guidance and placement. Assigned reading, lectures, and preparation of term papers.
Sem I, II, and S. S. Credit: 2
Brown

Education 490 Workshop in Tests and Measurements in Counseling

Prerequisite: Senior undergraduate or graduate standing and teaching experience.

This workshop deals with the use of tests in counseling and is planned specifically for counselors and teachers who have or expect to have counseling responsibilities. The different types of tests such as pencil and paper, performance, individual, group, interest, timed and non-timed, aptitude, achievement, and personal inventories, will be studied and sample applications made. Their selection, uses, and interpretation be fully investigated.
SS Credit: 2

Education 491 Workshop in Occupational Information and Guidance

Prerequisite: Senior undergraduate or graduate standing and teaching experience.

This workshop is planned specifically for counselors and teachers who have or expect to have counseling or guidance responsibility to assist them in developing their guidance program. Topics to be taken up will be: Working Definitions of Individual Pupil Cumulative Records; Counseling, Including Simple Interview, and Techniques, and the setting up of a Guidance program.
SS Credit: 2

Education 421 Nursery School Organization

Prerequisites: H.E. Ed. 224, 424.

A study of housing, organization, methods and equipment for operating a preschool nursery school.
Sem. II. Credit: 2
Smith

Education 407 Teaching Trade and Industrial Subjects

Recognized principles of teaching applied to typical shop situations as found in the school of vocational and adult education. Methods of teaching based upon the psychological aspects of learning as applied to both shop and related subjects. Topics considered are (1) the use of the lesson plan and the job sheet: (2) the demonstration, both for the whole class and for the smaller group; (3) individual practice, the follow-up on the demonstration; (4) assignment of reading and observation; (5) the notebook and note checking; (6) the lecture or class talk; (7) reports by pupils; (8) questioning; (9) checking and testing, examinations; (10) the use of models, charts, graphs, and diagrams; (11) the use of pictures of various kinds; (12) shop hygiene and safety; (13) management, routine, details, and discipline; (14) tool room procedure; (15) the maintenance of tools, apparatus, and equipment; and (16) the selection, care, and purchase of supplies.
SS Credit: 2

Education 443 Problems in Teaching Trade and Industrial Subjects

Individual work representing approved practice in the writing of text material that can be of immediate use in vocational classes. The writing of specific instruction sheets and the preparation of test material suitable for use in vocational classes.
SS Credit: 2

Education 413 Teaching Vocational and Adult Homemaking

Methods of instruction adapted to meet the needs, interests and abilities of juveniles and adults in vocational schools. Co-curricular activities will be included with emphasis upon club work, home experiences, school lunch programs, guidance, community contacts and summer community programs. Work experiences will be provided to supplement the content of the course wherever there is a worthwhile relationship and it is considered a practical teaching experience for the students in their pre-service training.
Sem. I, II, and SS
Johnson Credit: 2

Education 415 Vocational and Adult Homemaking Education Workshop

An educational plan which provides opportunity for teachers, coordinators, and local supervisors of homemaking, to obtain needed information in solving vocational problems related to specific school and community situations. Emphasis may be placed upon: developing a method of procedure and teaching aids suitable to use in local teacher training of the part-time evening school teachers; constructing a plan and teaching materials applicable to instruction of returned service men and women desiring technical skill in the arts of homemaking; organizing a guide and educational materials appropriate for the contribution of service to the State and local Family-Life program. The keynote of the workshop will be flexibility, active interchange of ideas, attention to individual and group needs with democratic sharing of responsibilities in working out helpful materials for use in vocational schools.
Credit: 2-4
SS
Johnson and others

Education 416 Problems in Teaching Vocational and Adult Homemaking

Prerequisites: Education 402, Philosophy of Vocational and Adult Education 413, Teaching Vocational and Adult Homemaking. Completion of a four year college course in home economics. Three years of teaching experience in a vocational school.

This course is a specific requirement for teacher classification by the State Board of Vocational and Adult Education, intended for homemaking teachers in the vocational schools of the state. Problems of special difficulty common to experienced teachers in this field will be analyzed and solutions suggested based upon statement of facts, the drawing out of controversial viewpoints, the facing of issues with their resulting consequences, the making of tentative decisions and the developing of possible procedures of action for each of the problems presented within the group.
Credit: 2
SS
Johnson

Education 459 Trade and Occupational Analysis

Prerequisites: Graduate standing or advanced undergraduate standing with teaching experience.

Analysis of current trades and occupations for instructional and guidance programs under modern social economic pressures. Analysis procedures developed for the continuous identification and interpretation of technological content, organization structure and functional definitions to keep pace with change in modern occupations. Recording procedures developed for analyses for use in curriculum revision and expansion in general and vocational education. Specific material developed in organization, content, travel or flow, and indexing analyses through individual problems.
Credit: 2
SS
Bowman

Education 502 Supervision of Industrial Arts Education

Prerequisite: Graduate Standing.

The course is organized primarily for industrial arts teachers. Basic principles of supervision based on national surveys are applied to the field of industrial arts. Supervisory functions are analyzed and detailed as to their applications in the field. Practical problems in the use of supervisory devices for the improvement of instruction are a required part of the course.
Credit: 2
SS
Wigen

Education 503 Preparation of Instructional Material (Plans II)

Prerequisite: Graduate Standing.

Survey of published material now available in published form. Identification and adaption of instructional material for use in course organization and curriculum building in the present range of situations in industrial education. Approved principles, methods and techniques employed in the preparation of materials of instruction. Advanced problems assigned in the construction of units, courses, and curricula in the field of the individual's interest and experience.
Credit: 2
SS
Brown

Education 463 Industrial Arts Education Workshop

Prerequisites: Senior undergraduate standing, graduate standing, or experience in teaching or in industry.

Through individual and group assignments a flexible series of opportunities will be available to work out practical teaching problems in selections from the following areas of professional preparation: Preparation of Instructional Material; Planning Teaching Methods; Shop Management; Securing and Handling of Supplies; Defining and Keeping of Records; Identification and Analysis of Instructional Content. The problems and required reports will be in terms of specific situations so far as it is possible. Group studies will be made of demonstration teaching, representative shop lay-out, and typical shop personnel plans under varying instructional requirements.
Credit: 2
SS
Brown, Wigen

Education 403 Trade and Industrial Education Workshop

Prerequisite: Senior undergraduate standing, graduate standing, or experience in vocational teaching or industry.

Through individual and group assignments a flexible series of opportunities will be available to work out practical teaching problems in connection with the teaching of trade and industrial subjects in vocational and adult education schools. The credit in this "workshop" will be supplementary to classification courses and will not be substituted in lieu of classification courses. The problems worked out by the students will be specifically practical. Definite standards of practicability will be set up which must be met in order to secure credit. Efforts will be made to group students in small groups where the common factors in their individual problems makes grouping possible. Progress reports will be made from time to time by individuals and small groups, especially on those phases of problems which have a significance in common with all the members in the work shop group. Typical areas of professional preparation would be: Adaptation of Instructional Material to Specific Requirements; Identification and Analysis of Instructional Content; Shop Management and Records; Demonstration Procedures; Shop Lay-outs. The maximum amount of credit which may be completed in three weeks in the Trade and Industrial Education Workshop will be two semester hours. If the student is able to identify and define satisfactory problems, the student may if he so desires take a maximum of four semester hours in the Trade and Industrial Education Workshop by taking two three week periods of work. The Workshop is planned to be of specific assistance in maintaining strong and adequate instruction in the various phases of trade and industrial work meeting the many problems of volume, urgency, and changing content.
Credit: 2 or 4
SS

Education 492 Workshop in Administration in Vocational and Adult Education

Prerequisite: Senior undergraduate or graduate standing and teaching experience.

This workshop is planned for administrators, or people looking forward to such work. Federal, State, and Local relationships will be considered with emphasis on local administration. The following points will be studied: the formulation and execution of policies; preparation, presentation and operation of budgets; plans for cooperation with other agencies; operating procedures in the part-time school; state and federal aids and their distribution; the selection, training, and assigning of duties of teachers, supervisors and coordinators; the planning and writing of reports of meetings of Boards, Advisory Committees, and staff; office organization and procedures—records, reports, inventories and accounting.
Credit: 2
SS

Education 501 Research Procedures

Prerequisite: Graduate Standing.

Systematic survey of the basic problems, methods, and tools for scientific studies in education. Designed to enable the student to see educational problems in their relation to each other, and to attack and solve such probems. The course offers a basis for approaching with scientific attitude other graduate courses. Special attention is given to the surveying and setting up of research techniques for problems in the vocational fields.
Credit: 2
Wigen

ENGLISH

English 102a Freshman English Composition

Required of all freshmen. The course is designed to give the incoming freshmen competence in grammatical analysis and correctness, punctuation, mechanics, and the beginnings of logical organization of material. A competence test in spelling is partial requirement for passing.
Credit: 3
Sem. I, II.
Callahan, Grube

English 102b Freshman English Composition

Prerequisite: English 102a.

Required of all freshmen. The course is designed to add to the freshman's competence in grammatical and mechanical accuracy the principles and practice of rhetorical effectiveness in writing, through increased vocabulary, variety of sentence structure, and varying modes of presentation of material. A competence test

in vocabulary is partial requirement for passing. Attention is also given to reading.
Credit: 3
Sem. II.
Callahan, Grube

English 216 Survey of English Literature

An introduction to English literature from Beowulf to the end of the nineteenth century. Readings, reports, lectures, class discussions.
Credit: 2
Sem. I, II.
Callahan, Grube

English 346 Expository Writing

Prerequisite: English 102b.

Practice and theory of the research report, magazine article, and industrial report.
Credit: 2-3
Sem. I, II.
Callahan, Grube

English 402 Fiction

Prerequisite: English 216.

Reading and analysis of early prose fiction to the modern novel. Accumulative experience through the ages is important in the development of any culture and therefore chronology is stressed as well as analysis.
Credit: 2
Sem. I, II.
Grube

English 404 Poetry

Prerequisite: English 214 or English 216.

A study of representative American and English poets of the late nineteenth and twentieth centuries.
Credit: 2
Sem. I, II.
Callahan

English 348 Survey of American Literature

An introduction to American literature from Colonial times to the present. Readings, reports, lectures, class discussions.
Credit: 2
Sem. I, II.
Callahan

English 406 Drama

Prerequisite: English 216.

A study of the principles of dramatic literature, with intensive reading of a few great types and wider reading of other plays, regardless of time of composition or national origin. Emphasis upon Shakespeare.
Credit: 2
Sem. II.
Callahan

English 106 Speech I

Required of all freshmen. Practice in the elements of effective speaking before a class, with criticism from the instructor.
Credit: 2
Sem. I, II.
Erickson

English 223 Speech II

An advanced course in various types of speech making with a careful study of audience analysis.
Credit: 2
Sem. I, II.
Erickson

English 320 Speech III

Materials and methods of discussion. A study of the kinds of discussion, their purposes, strength and weaknesses.
Credit: 2
Sem. I, II.
Erickson

English 444 Play production

Elective for juniors and seniors. A study of the techniques of all aspects of play production, including selection and cutting plays, directing, acting, make-up, costume, lighting, and stage equipment.
Credit: 2
Sem. II.
Erickson

MATHEMATICS

Mathematics 209 College Algebra

Fundamental processes and selected work in college algebra, including special work in logarithms and the slide rule. Special efforts are made to give each student his maximum progress.
Credit: 4
Sem. I, II.
Rich, Tustison

Mathematics 213 Trigonometry

Prerequisite: Mathematics 209.

Introduction to the elements of trigonometry. The solution of the right triangle. Variations of the trigonometric functions, the fundamental relations and functions of the sum and difference of angles. The solution of the oblique triangle. Slide rule and logarithmic calculations using the trigonometric functions in solving practical problems. One field problem in the use of the sextant or the transit.
Credit: 3
Sem. I, II.
Rich, Tustison

Mathematics 216 College Geometry

Prerequisites: Mathematics 209 and 213; or consent of the instructor.

This course may be called a college course of "Geometry in Action," covering the view points as taken by projective geometry, descriptive geometry, and metrical geometry. The course includes the study and use of linkage instruments to facilitate a thorough understanding of the subject material that is given. It is closely correlated with the work as a whole in Industrial Education.
Credit: 2
Sem. I.
Rich

Mathematics 217 Elements of Navigation

Prerequisites: Mathematics 209 and 213; or consent of the instructor.

The study and use of maps and charts. Instruments commonly used. Navigation by dead reckoning. Radio navigation. Use of computers, graphs, and tables. The C.A.A. prescribed work in navigation will be used as a guide in this course.
Credit: 2
Sem. I, II.
Rich, Price

Mathematics 220 Spherical Trigonometry

Prerequisites: Mathematics 209 and 213; or consent of the instructor.

This course takes up primarily the solution of the spherical triangle with special application to the astronomical triangle. Basic parts of spherical geometry as they apply will be covered. This course is adapted not only to those who are directly interested in the problems in aviation but to those who are interested in world travel.
Credit: 2
Sem. I.
Rich

Mathematics 314 Analytic Geometry

Prerequisites: Mathematics 209 and 213; or consent of the instructor.

Algebraic treatment of geometry. A graphical analysis of the straight line, the circle, and conic sections in general.
Credit: 2
Sem. I.
Rich

Mathematics 315 Calculus

Prerequisites: Mathematics 209, 213, and 314; or consent of the instructor.

A course of differential and integral calculus with practical applications.
Credit: 4
Sem. II.
Rich

MUSIC

Music 150 Solfeggio

The study of solfeggio, which includes ear training, is the foundation of musical education. Such fundamental principles as rhythmic notation, measure, three against two, tonal notation and relations, intervals and inversions, diatonic and chromatic scales, signatures, and rhythmic and melodic dictation are studied.
Credit: 1
Sem. I.
Cooke

Music 151 Harmony 1a

Prerequisite: Music 150.

A detailed study of chord construction. All triads in major and minor modes, and dominant sevenths and their inversions. Dispersed harmony. Keyboard work and the playing of cadences.
Credit: 1
Sem. II.
Cooke

Music 152 Harmony 1b

Prerequisite: Music 151.

Introduction to counterpoint; passing tones; contrapuntal treatment of the harmonic material of harmony 1a. Harmonization of scales and simple melodies at the keyboard.

Credit: 1

Sem. I.
Cooke

Music 153 Introduction to and Appreciation of Music

The course deals with the fundamentals of music including form, harmony, instrumentation, and history. Presentation is through lecture, illustration and recordings.

Credit: 1

Cooke

Music 160 Theory

Prerequisite: Music 151 and 152.

Acoustics; musical terminology; notation; ornamentation; the Gregorian modes; description of the orchestral instruments; analysis of music forms; including the song forms. Also practical work in elementary orchestration. This course summarizes the knowledge necessary to every teacher and professional musician.

Credit: 1

Sem. I.
Cooke

Music 162 Conducting

Prerequisites: Junior standing. Participation in at least one of the musical organizations of the college.

Technique of conducting. Chorus and orchestra from viewpoint of prospective conductor. Principles of interpretation. Score reading and transposition. Care and classification of voices.

Credit: 1

Sem. II.
Cooke

Choral Organizations

Membership in the Glee Clubs is open to all students, but under classmen, especially, are urged to become members. Careful evaluation and testing for classification, basic principles of proper breathing and good tone production, extensive work in sight reading, and the fundamentals of good choral techniques are studied through out the year.

The Symphonic Singers, an a Cappella choir of seventy voices, is representative of the best Stout has to offer in choral work. The major portion of these singers are one year glee club graduates, and their singing is rapidly earning for them a national reputation. The many appearances during the year include an annual Spring Tour.
Cooke

Music 164 Men's Glee Club

The Men's Glee Club.

Credit: 1

Full year.
Cooke

Music 165 Women's Glee Club

The Women's Glee Club.

Credit: 1

Full year.
Cooke

Music 166 The College Band

Membership in the college band is open to all students who have had training and experience in the playing of a band instrument. The band not only presents formal concerts, but plays for all athletic events. The Coed Band of twenty-five members performs for special occasions and at basket-ball games. (No credit allowed if credit has already been given in orchestra)

Credit: 1

Full year.
Cooke

Music 167 The College Orchestra

The orchestra is an organization of twenty-five members with symphonic instrumentation. Rehearsals are held once a week and special attention is given the string section in private rehearsals. This organization makes public appearances on and off the campus, and provides the accompaniment to the larger choral works presented by the combined glee clubs.

(No credit allowed if credit has already been given in Band)

Credit: 1

Full year.
Cooke

PHYSICAL EDUCATION AND COACHING

Physical Education 127 Physical Education I (Men)

Wide range of free exercises, calisthenics, floor work, and games. In season, work in athletics. Physical efficiency tests to determine individual improvement. Individuals will conduct classes in Physical Education. Life saving tests to qualified individuals who desire Red Cross certificates.

Sem. I, II. Credit: 1
Johnson

Physical Education Intramural Sports (Men)

A complete program of all sports in season consisting of an "Athletics for All" aim.
Johnson

Physical Education 263 Basketball Coaching (Men)

Prerequisite: Physical Education 127 (9 weeks)

Instruction in individual and team fundamentals: Passing, goal throwing, dribbling, turns, stops, special drills, etc. Team play: styles of offense and defense used by the leading coaches. Problems of organization and administration: Schedules, training selection of material, and the purchase and care of equipment.

Sem. I, 2nd quarter; Sem II, 3rd quarter. Credit: 1½
Johnson (2-2)

Physical Education 265 Football Coaching (Men)

Prerequisite: Physical Education 127 (9 weeks).

Instruction in individual and team fundamentals: Tackling, blocking, kicking, passing, special drills, etc. Team play. Styles of offense and defense used by the leading coaches. Probems of organization and administration: Schedules, training, selection of material, and the purchase and care of equipment.

Sem. I, 1st quarter; Sem. II, 4th quarter. Credit: 1½
Johnson (2-2)

Hygiene 101 (Men)

This course presents personal and general hygiene as a means of improvement of living. It considers the meaning of health in terms of life values, the biologic approach for the study of health, the place of intelligent control in modern civilization, unscientific and irrational health proposals, ways for improvement of health and prevention of disease. This course does not consider sanitation and public health problems as such.

Sem. I, II. Credit: 1
Johnson

Physical Education 128 Physical Education (Women)

First year physical education is planned to meet the needs of the women students. Careful observation shows that these are along the lines of personal development, present recreation, and training for future recreation.

Four quarters of physical education are required of each freshman woman. One of these quarters must be given over to a course called "Health and Posture Training." One other activity required of each girl is swimming. These two courses may be taken at any time during the first year. The first and fourth quarters should be utilized for outdoor work.

The activity during the remaining two quarters may be selected by the students according to their interests and abilities. The activities from which they may choose are as follows: Field hockey, tennis, archery, basketball, volleyball, bowling, folk dancing, kittenball, badminton, deck tennis, and shuffleboard.

The women differ so much in their ability in swimming that the work is given in separate classes to beginner, intermediate, and advanced groups.

Sem. I, II.
Antrim Credit: 0 (-2)

Physical Education 228 Physical Education II (Women)

Sophomore women take four quarters of physical education but only one of these is a requirement, swimming. This is an unusually good activity for the development of health and beauty of form. It exercises all the muscles equally well and leads to later enjoyment and continued activity.

Each girl is urged to select one other individual sport such as tennis, golf, bowling, or archery to be used as a hobby during the junior and senior years.

Each individual is also encouraged to take at least one quarter of an activity in which team play is necessary. All should develop the social principles of working as a team unit.

So many electives allow for variation in interests and abilities and in most cases lead to a higher standard of work.

The electives for the sophomores are: Field hockey, tennis, archery, basketball, volley-

ball, bowling, dancing, kittenball, badminton, deck tennis, and shuffleboard.
Sem. I, II. Credit: 0
Antrim (-2)

Physical Education 380 Theory and Principles of Physical Education for Women Teachers

Prerequisite: Physical Education 128.

A course for women who wish to teach physical education in connection with other subjects. It is a careful study of the aims and objectives of modern physical education as applied to work in schools, camps, and supervised playgrounds. The material includes formal and informal methods of teaching, the presentation of the varied new physical education programs, the related purpose of physical examinations and personal hygiene, a study of the organization and administration of gymnasium, playgrounds, recreation centers, swimming pools. Seasonal programs adapted to groups of various ages are formulated for indoor and outdoor work.
Credit: 2
Sem. I, II.
Antrim 1 hr. lecture, 2 hr. lab.

Physical Education Correction Individual Gymnastics

Special diagnosis and prescription of exercises for correction of minor physical deficiencies which are noted at the time of the physical examination by the college physician. In this class, each student is considered as an individual, special case. It is primarily for those who wish to improve their posture, overcome detriments to their health, e. g., weak arches, weak abdominal muscles, indigestion, constipation, overweight, underweight, poor circulation, sleeplessness, weak heart, etc. A silhouettograph camera helps to determine and verify posture needs, preceding corrective work.

A corrective room in the gym has been especially equipped with a triple mirror, mats for exercise, beds for students who need regular rest and relaxation periods to build up reserve strength and vitality for better health and efficiency.
Credit: 0
Sem. I, II.
Antrim Hours arranged

Physical Education Recreational Sports (Women)

The Women's Athletic Association sponsors various sports which promote interest and enthusiasm in recreational activities with intramural competition. There is created an opportunity for every girl in school to participate in various recreational activities, and in "play for play's sake."

In the list of fall interests, a girl may choose field hockey, archery, tennis, or organized hiking. Winter diversions include volley ball, basketball, bowling, shuffleboard, deck tennis, life saving methods, swimming, diving, ice skating, and badminton. Spring activities include archery, tennis, and kittenball. At least one afternoon a week the swimming pool is open to women. Two evenings a week they may use the gym floor for recreational activities and intramural sports.

NATURAL SCIENCES
BIOLOGY

Biology 122 General Biology

Study of living things, their structure and organization, metabolic processes, behavior, reproduction, and their relationship to their environment and to each other.
Credit: 3
Sem. I. (1-4)
Marshall

Biology 214 Physiology and Anatomy

Man's place in the biological world; human anatomy based on dissection of the cat and other laboratory material; fundamental physiological processes of all the organ systems; embryological development and inheritance of man.
Credit: 5
Sem. I, II. (2-6)
Marshall, Arneson

Bacteriology 206 General Bacteriology

Morphological and physiological characteristics of yeasts, molds and bacteria; methods used in culture and identification; introductory studies in bacterial analysis of water, milk and other problems in sanitation; food bacteriology.
Credit: 3
Sem. II. (1-4)
Marshall

Biology 316 Zoology

A survey of the animal field with emphasis on classification, ecology, and evolution and other general subjects. Special consideraton is given to parasites and any other groups which are economically important to man.
Credit: 5
Sem. I. (2-2)
Arneson

Biology 442 Community Hygiene

Fundamentals of health, control of communicable disease, preventative medicines, public health programs, etiology of disease. Pathological, bacteriological, and immunological aspects emphasized. Operation of national and state health laws.
Sem. I. Credit: 2-3
Marshall

Biology 362 Advanced Physiology

Prerequisite: Biology 214, Chemistry 115.

Historical and quantitative studies on human blood, experiments on frog and turtle hearts and on muscle-nerve preparations of the frog. Experiments on human body.
Sem. II. Credit: 3
Marshall (1-4)

Biology 432 Heredity and Eugenics

A study of laws of inheritance and means for improvement of the human race.
Sem. I. Credit: 2-3
Arneson

Bacteriology 422 Applications of Bacteriology

Not open to students who have had Bacteriology 206, but may be substituted for that requirement.

Applications of bacteriology to food preservation and community health. Relation of bacteria to the home and institutions.
Sem. II, SS. Credit: 3
Marshall

CHEMISTRY

Chemistry 115 Inorganic Chemistry

Chemical viewpoints, laws, principles and atomic structure as related to chemical reactions. The study of non-metals is followed by that of metals. A constant effort is made to relate material taught to the needs of Home Economics and Industrial Education majors. Experiments are selected as far as possible and practical to assist in such applications.
Sem. I, II. Credit: 5
McCalmont, Cox (2-6)

Chemistry 208 Organic Chemistry

Prerequisite: Chemistry 115.

Influence of structure on chemical behavior; isomerism; the study of hydocarbons, alkyli halides, alcohols, ethers, aldehydes, ketomes, acids, esters, fats, soap, carbohydrates, cellulose and rayon, nylon, plastics, proteins, alkaloids, synthetic drugs, and vitamins. Appreciations in related organic chemistry are sought by promoting an understanding of the changes involved in cookery, nutrition, laundry, cleaning and other household processes. Emphasis is placed upon the important relationships of organic chemistry to industrial processes in the manufacture of rayon, nylon, petroleum products, plastics and other important commercial substances and upon the synthesis of dyes, drugs and vitamins.
Sem. I, II. Credit: 4
Cox (2-4)

Chemistry 322 Biochemistry

Prerequisites: Chemistry 208, Biology 214.

Study of colloids; of proteins and protein digestion products; of the intermediary metabolism of carbohydrates, fats, and proteins in the animal body. Qualitative and quantitative determinations of the end products of metabolism. Nutritional significance of minerals, vitamins and hormones.
Sem. I, II.
Cox Credit: 3
(1-2)

Chemistry 445 Chemistry of Materials

Needs of the members of the class shape the trend and emphasis to be placed. At present, the topics most valuable are: Rubber, natural and synthetic, fuels and lubricants as applied to use in all kinds of machines, and metals both ferrous and non-ferrous. At the same time an effort is made to acquaint the students with subject matter directly necessary to understand Industrial Arts problems.
Sem. II.
McCalmont Credit: 3
(2-2)

PHYSICS

Physics 421 Physics I

Electricity. Mechanics. Heat. Practical applications of general physics laws is stressed in special laboratory problems, or demonstrated by apparatus or machines in actual use. Content applicable to the needs of prospective teachers in industrial education, home economics, and the sciences.
Credit: 5
Sem. I, II. (3-4)
Tustison, Rich

Physics 423 Physics II

Sound, light and an introduction to the new developments in physics. This with Physics I covers the study of the general laws of physics as one of the urgent needs for prospective teachers.
The subject matter includes such topics as vision, lighting and illumination; optical instruments; high frequency vibrations of sound and light; polarization of light in its various applications; color, spectra and colored printing.
Significant modern applications are presented through demonstrations given and participated in by the instructor and the students in the lecture room and in the laboratory. The equipment for this course is exceptionally good.
Credit: 3
Sem. I, II. (2-2)
Tustison, Rich

Physics 425 Physics III

Prerequisites: Physics 421 and 423, Mathematics 209.

Strength of materials and the materials of construction in machine and building trades. Problems in wood, steel, and concrete construction. Standard and special tests in various grades of iron and steel; building materials such as cement, brick and woods of various kinds, glues, screws, nails, and other fasteners.
Credit: 3
Sem. I, II. (2-2)
Good

Physics 427 Physics IV Electronics

Prerequisites: Physics 421 and 423; or consent of the instructor.

An introduction to the study of electron tubes at work, television and the atom-smashing machines.
This course covers an introduction to the following: Physical concept of actions within the atom; alternating current circuits; thermionic tubes and timing devices; rectifying tubes; arc tube oscillators and inverters; photo-electric and photronic cells; the ignition, spot-welding control and speed control of motors; the strobotron and the stroboscope; the x-ray tube; the cathode ray tube and ultra-high frequencies; television; the rheetron; the cyclotron.
The laboratory experiments will vary from the operation of simple tubes with a study of the characteristic results to the operation and analysis of some of the newest electronic controls and devices.
Credit: 3
Sem. II. (2-2)
Rich

Physics 219 Physics V Elements of Meterology

Prerequisites: Sophomore classification. Mathematics 209, 213.

An elementary ground school course giving specific training in the fundamentals of meteorology. It covers the meteorological elements visually and instrumentally observed: namely; state of wind direction and velocity, ceiling and precipitation. The purpose is to develop proficiency in the technique required in conjunction with elementary flight training. The C.A.A. prescribed work in meteorology will be used as a guide in the course.
Credit:
Sem. II.
Good

SOCIAL SCIENCES

Social Science 201 General Economics

A study of business organization, production, how prices are determined, distribution, the influence of government on business, public utilities, money and banking, public finance, labor organization.
Credit:
Sem. I, II.
Stephan

Social Science 215 Origins and History of World War II

Prerequisites: Junior or senior undergraduate standing, graduate standing, or equivalent experience.

This course aims to aid the student in an understanding of the backgrounds and development of the present war. A brief survey will be made of the rise of the Fascist governments of Hitler and Mussolini, the foreign policies of the major European states, and the relations of Japan and China to the western world. American foreign policies and the organization of the government on a war basis will be reviewed. The class will study the progress of the war from its beginnings to the present and emphasis will be given to current developments. Attention will be given to plans for a just and durable peace.
Credit: 2 or 3
Sem. II.
Stephan

Social Science 301 Economic History of the United States

Prerequisite: Social Science 201.

A study of the economic evolution of the United States since colonial times. Approximately two-thirds of the course is devoted to the period since the Civil War. A special emphasis is placed on the development of economic problems and the foundations of modern industry.
Credit: 3
Sem. I, II.
Price

Social Science 309 General Sociology

A study of the social heritage; the interdependence of the individual and the group; the influence of group association on the individual's behavior; collective behavior in typical groups of crowds, publics, classes, castes, races; community and social organization; social processes.
Credit: 3
Sem. I, II.
Stephan

Social Science 311 Government

Prerequisites: Social Science 201, 309, or consent of instructor.

A basic course intended to give the student a background of fundamentals. The emphasis will be placed on principles, processes, and problems. The treatment of institutions will be functional; but where there are separate political entities to be considered, they will be analyzed. Approximately half of the time will be devoted to a review of the American governments. Throughout the course, the comparative approach will be used.
Credit: 3
Sem. I, II.
Price

Social Science 326 Problems of the Family

Study of social problems of family life. Special emphasis on development and maintenance of satisfactory family relationships. Should parallel Home Economics, Education 424, Social Science 309.
Credit: 3
Sem. I, II.
Michaels

Social Science 409 Recent History of U. S.

Prerequisite: Social Science 103.

A study and interpretation of American history since the Civil War. Emphasis is put on those developments which best help to explain present United States conditions. Some time is devoted to the study of recent world problems in which the United States has played a part.
Credit: 3
Sem. II.
Price

Social Science 414 Labor Problems

A study of the problems of the worker in modern industry, backgrounds of labor movements, current union organization and practice, labor and management relations, collective bargaining, and the causes and proposed solutions of such typical problems as unemployment, wages, hours, political activity, and government and labor relations.
Credit: 3
Sem. II.
Stephan

Social Science 417 American Politics

Prerequisites: Social Science 103, 105.

Analysis of modern political parties, nominating methods, campaigns, elections, practical politics in legislative bodies, machines and bosses, and other divisions of present day American politics. Reforms and remedies for existing political malpractice are critically examined.
Credit: 2-3
Sem. I.
Price

Social Science 407 History of the Americas

Prerequisites: Social Science 201, 309, or consent of instructor.

The objective in the course is an understanding of the backgrounds of American history in hemispheric relationships. While the basic emphasis will be upon the history of the United States of America, since it is a more familiar point of departure, the ultimate goal is to provide a setting for the student's thinking that gives horizontal and vertical perspective; a breadth of scope that will include Canada and the Latin Americas, and a depth that will suggest Occidental and Oriental influences.

Credit: 2-3

Sem. I, II.

Price

Social Science 410 Modern World

Prerequisites: Social Science 201, 309.

A course concerned primarily with direction pointing movements in the world's history which have influenced and shaped the society in which we live. The objective is to provide an understanding of historical "patterns" which will aid the student in evaluating modern trends in terms of historical backgrounds and provide a frame of reference for interpreting the contemporary world.

Credit: 4

Sem. I, II.

Price

Social Science 411 Social Problems

Prerequisites: 9 hours of social science or consent of instructor.

A study of the major social problems and tensions in American life which need to be analyzed, interpreted, and understood for effective living in American democratic society. Students will study and participate in the development of solutions for these problems.

Credit: 3

Sem. II.

Stephan

Home Economics

ART

Art 220 Clothing Selection

Factors which influence the selection of dress design for the individual. Application of art principles to clothing. Art 106 should precede or parallel this course.

Credit: 2

Sem. I, II. (1-2)

Jeter, Van Ness

Art 106 Fundamentals of Design

A basic course prerequisite for further art work. Emphasis on the elements and principles of design. A sensitizing course aiming to develop the student's ability to see and to discriminate. Lettering, layout, color theory and practical applications in the field of home economics.

Credit: 3

Sem. I, II. (-6)

Rasmussen

Art 332 Advanced Design

Prerequisite: Art 106.

Creative experiences in color and design. Design applications related to clothing and interior decoration. Experiences in techniques of textile design; block printing, stencil, silk screen, batik, stitchery and dyeing. Considerations of applied design and structural design.

Credit: 2

Sem. I. (-4)

Rasmussen

Art 206 Art Appreciation

A lecture course designed to develop critical judgment in evaluating traditional and contemporary art forms. Emphasis on the broad field of art and how it enriches everyday life. Visits to Minneapolis and St. Paul galleries and shops. Visual aids.

Credit: 2

Sem. I.

Rasmussen

Art 400 Crafts

Prerequisite: Art 106.

The creative building of visual things with stress upon fine original design. An introduction is made in several crafts: weaving, leather, metal, ceramics, bookbinding.

Credit: 2

Sem. I, II. (-4)

Rasmussen

Art 446 Sketch

To develop facility in sketching required in a variety of home economics problems: costume figures, interiors, charts and other visual devices. Form, value, color, composition; charcoal, pen and ink and water color.

Sem. II.

Rasmussen

Credit 1 (-2)

Art 460 Advanced Crafts

Prerequisite: Art 400.

The student specializes in the mediums which are best suited to his interests and ability.

Sem. II.

Credit: 2

Art 334 House Furnishing

Prerequisite: Art 106.

A study of the housing and house furnishing needs of the family as they relate to beauty, health, privacy, convenience, economy and leisure time activities in the home.

Sem. I, II.

Carson

Credit: 3 (1-4)

Art 323 Problems in House Furnishing

Prerequisite: Art 334

A course in which curtains, slip covers, and other articles for the house may be planned and made, and furniture reconditioned.

Sem. I, II.

Carson

Credit: 2 (1-4)

Home Economics 244 Weaving

An elementary course is planned for those students interested in the processes and techniques of weaving. Instruction will be given to meet the specific needs of the student. The following phases of weaving will be emphasized: plain weave and design variations (texture weaves), pattern weaves, planned on paper and executed on the loom. A thorough study of the modern use of the overshot weave and the various ways of weaving (tabby, honey-comb, bound); summer and winter and various lace types of weaves suitable for table mats. Materials will be purchased by the student.

Sem. II, SS

Rasmussen

Credit: 2 (-4)

Art 430 Art History

Survey of the fine arts in the most significant periods with emphasis on contemporary work. Visits to museums and galleries.

Sem. I, II.

Carson

Credit: 2

Art 436 Clothing Design

Prerequisite: Home Economics 218.

Creative approach to clothing design. Experiments with different sources for original design.

Sem. II.

Rasmussen

Credit: 2 (1-4)

Art 410 Pottery

Experience in building pottery with coil and slab methods, throwing on the wheel, underglaze painting, biscuit firing, glazing and gloss firing.

Sem. II.

Rasmussen

Credit: 2 (1-4)

FOODS, DIETETICS, AND INSTITUTIONAL MANAGEMENT

Home Economics 112 Principles of Nutrition

Parallel: Home Economics 114.

This course emphasizes the maintenence of health through desirable food selection, habits, and health practices. Planned to help freshmen handle health and nutrition problems.

Sem. I, II.

Rogers, Cruise, Buchanan

Credit: 2

Home Economics 212 Family Nutrition

Prerequisites: Home Economics 112, 114, Chem. 208 precede or parallel.

A scientific study of the fundamental principles of human nutrition as a basis for the selection of food for the individual and the family group. Consideration of child feeding.

Sem. I, II.

Cruise

Credit: 3 (2-2)

Home Economics 114 Food Preparation

Parallel: Home Economics 112.

A study of basic principles in the preparation and service of foods.
Sem. I, II. Credit: 2
Rogers, Buchanan, Cruise (-4)

Home Economics 230 Foods

Prerequisites: Home Economics 112, 114.

This is a continuation of food preparation studied in Home Economics 114. Application of scientific principles to cookery processes; analysis of basic recipes; establishment of good standards for food products.
Sem. I, II. Credit: 3
Buchanan (1-4)

Home Economics 230X

Prerequisite: Home Economics 230.

Students completing Home Economics 230 are urged to use additional experiences for the improvement of abilities in food preparation. A test will be given in the early part of Home Economics 308 to aid the students in an evaluation of their progress.

Home Economics 308 Meal Management

Prerequisites: Home Economics 230, 212.

A study of dietaries planned to meet nutritional requirements at different income levels. Meal preparation planned in accordance with these dietaries including serving problems and food costs are considered.
Sem. I, II. Credit: 3
Rogers (1-6)

Home Economics 438 Experimental Foods

Prerequisites: Home Economics 230, Chem. 208.

The course involves the solving of cookery problems from the scientific viewpoint. Its primary purpose is to increase students' knowledge of foods by having theories tested through the preparation of foods under controlled conditions, observations checked and recorded, results summarized. Special emphasis will be placed on the study of problems relating to conservation and substitution of food materials.
Sem. I, II. Credit: 3
Rogers (-6)

Home Economics 400 Food Demonstrations

Prerequisites: Home Economics 230, 308.

Instruction in the technique of food demonstration, planning and giving demonstrations for different groups; lecture demonstrations by specialists from commercial fields.
Sem. I, II. Credit: 2
Buchanan (-4)

Home Economics 446 Food Preservation

A study of problems in canning; in making jellies and preserves; pickling; drying and food storage; community canners. Discussion and laboratory.
Buchanan Credit: 2

Home Economics 456 Special Food Problems (Advanced Experimental)

Prerequisite: Home Economics 438.

Directed individual work. Involves an extensive study of principles and applications of research methods as applied to food problems. Intensive literature review of problems undertaken.
Sem. I, II. Credit: 3-4
Rogers (4-6)

Home Economics 310 Nutrition and Dietetics

Prerequisites: Home Economics 212, Chemistry 322 (May parallel).

Aims to extend the students' knowledge of the science of nutrition involving digestive and metabolic processes and products. Measurements and determination of food values.
Sem. I. Credit: 3
Cruise (2-2)

Home Economics 418 Diet in Disease

Prerequisites: Home Economics 310, Physiology 362. (May parallel).

Abnormal nutrition with dietary treatment of certain diseases; experiments and problems with respiratory apparatus, calorimeter and laboratory animals.
Sem. II Credit: 3
Cruise (2-2)

Home Economics 300 Applied Institution Management

Prerequisites: Home Economics 308.

Students prepare and serve meals in the college tea room under the direction of a student manager. Special emphasis is placed on meal planning, recipe selection, the most economical use of materials and time, dining room management, food preparation, and cost control. Different institution management problems are discussed.
Sem. I, II.
Hadden Credit: 3
(1-3)

Home Economics 328 Institution Administration

Prerequisites: Home Economics 452 or 300.

A study of the organization and administration of the food service in various types of institutions such as hospitals, schools, and commercial establishments. The course includes personnel management problems, purchasing methods, the keeping of records and accounts, and housekeeping management.
Sem. II.
Hadden Credit: 3
(3-)

Home Economics 452 Institution Food Preparation

Prerequisites: Home Economics 230, 308.

The laboratory work consists of planning of meals for the institution, standardization of recipes, calculation of food costs, the operation and care of equipment, together with the preparation of food for the college cafeteria. The specific problems of food selection and large quantity preparation are discussed in the lecture period.
Sem. I.
Hadden Credit: 3
(1-4)

Home Economics 463 Institution Management Problems

Prerequisites: Home Economics 452 or 300, Home Economics 328.

Directed individual work in selected problems of the institution. Laboratory work can be done in the college cafeteria and tea room.
Sem. I, II.
Hadden Credit: 2-3
(To be arranged)

Home Economics 443 School Food Service

Prerequisites: H. E. 212 and H. E. 308 or its equivalent.

Educational possibilities of this program will be considered, also detailed studies of provisions for the school lunch program, management, menu planning, food preparation and service.
SS
Hadden Credit: 2-3

Home Economics 442 Problems in Food Preparation

This course to be offered to students desiring to study the best and newest food preparation methods recommended for preserving food constituents.
SS
Rogers

Home Economics 401 Trends in Nutrition Credit: 2-4

This course aims to bring one up-to-date on the changing methods of study and direct one's thinking to the newer nutritional problems and policies.
SS
Cruise

Home Economics 513 Institutional Management Seminar Credit: 2

Prerequisites: Home Economics 452 or 300 and Home Economics 328.

Organized readings in the field of institution management. Written and oral reports will be made on the readings. The reports will be discussed.
SS
Hadden

Home Economics 511 Nutrition Seminar Credit: 1

Graduate Standing.

Reports, discussions and readings.
SS
Cruise

Home Economics 508 Food Seminar Credit: 1

Graduate Standing.

Assigned readings, reports and discussions.
SS
Rogers

Credit: 1

CLOTHING AND TEXTILES

Home Economics 102 Clothing

Emphasis on personal clothing problems and good standards of dress for college women. Fundamentals of clothing construction. Integrated with Art 220.
Credit: 3
Sem. I, II. (-6)
Jeter, Van Ness

Home Economics 102x

Upon completion of Home Economics 102, students are urged to apply learnings in repetitive and new out-of-school experiences, in order to improve ability to solve individual problems involved in the construction of clothing. A performance test is given at the beginning of the following course, Home Economics 218, with a view to aiding the student in measuring his progress and in evaluating his ability in relation to that of other people.

Home Economics 218 Clothing Construction

Prerequisite: Home Economics 102.

A study of personal and technical problems involved in the selection and making of rayon and wool garments. Emphasis on the making and use of a foundation pattern. Some consideration given to economic aspect of individual wardrobe to family income and family clothing needs.
Credit: 3
Sem. I, II. (1-4)
Jeter

Home Economics 320 Advanced Clothing Construction

Prerequisites: Home Economics 218 or equivalent.

Course designed for work in advanced construction and tailoring.
Credit: 2-3
Sem. II. (4-6)

Home Economics 312 Applied Dress Design

Prerequisite: Home Economics 218.

Practical application of principles of costume design through planning and construction of garments by various techniques including draping. Emphasis on individuality in costume through appropriate use of line, proportion, color and texture. Field trip required.
Credit: 2-3
Sem. II. (4-6)

Home Economics 314 Children's Clothing

A study of the problems involved in the selecting, planning, and making of children's clothing. Emphasis is placed on the relation of design to self development. Garments are designed and made for children who can be studied in the laboratory.
Credit: 2
Sem. I. (-4)
Jeter

Home Economics 315 Textiles

Study of fibres, yarns, weaves, finishes and design as applied to the selection of clothing and household fabrics.
Credit: 3
Sem. I, II. (2-2)
Van Ness

Home Economics 322 Textile Problems

Prerequisite: Home Economics 315.

Study of investigations and new developments in the clothing and textile field with application of textile findings in Home Economics.
Credit: 2-3
Sem. I, II. (1-2)
Van Ness

Home Economics 316 Clothing Economics

Prerequisite: Home Economics 317.

Buying points of clothing; evaluation of buying guides; study of clothing plans for good management of individual and family clothing.
Credit: 2-3
Sem. II.
Van Ness

Home Economics 336 Clothing Problems

Emphasis on preparation for the teaching of clothing. Evaluation and preparation of illustrative material. Flat pattern design. Opportunity for individual studies.
Credit: 2
Sem. I, II. (1-2)
Jeter

Home Economics 370 History of Costume

A study of the development of costume. Factors which influence change in fashion; qualities in style that make for lasting beauty; influence of the past on present-day costume.
Sem. I
Credit: 2
Jeter

Home Economics 514 Clothing Seminar

Changing emphasis in clothing courses to meet emergency situations. Problems involved in the selection, adaptation, and presentation of clothing subject matter to meet various conditions. Choice of problems based on needs and interests of individual students.
SS
Credit: 1
Jeter

FAMILY LIFE

Home Economics 116 Personal Development

An orientation course concerned with typical college problems—personal, social, professional.
Sem. I.
Credit: 2
Michaels

Home Economics 317 Consumer Information

Study of motives in consumption; family income and expenditures; selection of commodities and services; buying and selling practices. Evaluation of consumer aids and investigation of local situations. Consideration of present day consumer problems.
Sem. I, II
Credit: 3
Van Ness

Home Economics 318 Health of the Family

A study of factors essential to health and physical development of adults and children, and of family responsibilities for the maintenance of health standards.
Sem. I, II.
Credit: 2
Trullinger

Home Economics 333 Household Equipment

A study of the selection, construction, operation and mechanical care of household equipment as it is related to the well being of the family group.
Sem. I, II.
Credit: 2
Trullinger (1-2)

Home Economics 403 Home Management

Prerequisite: Junior Standing.

Management of family resources, time, energy, money and equipment. Emphasis of the social aspects and adjustments of family life. Residence in the Home Management House for six weeks with experience in the management of the house and the care of a young child.
Sem. I, II.
Credit: 3
Trullinger

Home Economics 224 Growth and Development of the Child.

Prerequisite: Psychology 123.

A study of the physical, mental, emotional and social development of the preschool child. Emphasis is on a positive philosophy of child guidance through a better understanding of the growth processes of the preschool child. Lecture. Discussion. Observation of the nursery school day.
Sem. I, II.
Credit: 2
Smith

Home Economics 424 Principles and Practices of Child Guidance

Prerequisite: H. E. 224.

Factors involved in the successful personality development of the preschool child. Emphasis is on application of fundamental principles and practices of guidance. Evaluation of the literature in the field is, also, emphasized. Lecture. Discussion. Assisting in the nursery school.
Sem. I, II.
Credit: 2
Smith

Home Economics 352 Housing

Social and economic aspects of housing in relation to family welfare. Rural and urban housing conditions with remedial and restrictive measures for housing evils. Costs of housing, relation of cost to family income, and methods of financing. Credit: 2
Sem. I, II.
Carson

Note: See Social Science 326 for Course in Problems of the Family
See Educaton 408 N. S. for Teaching in Nursery School
See Education 421 N. S. for Nursery School Organization

Home Economics 510 Problems in Home Economics Education (Research)

Prerequisite: Graduate Standing.

Opportunities will be made for students to study teaching problems in curriculum construction, evaluation, preparation of instructional material and other areas of homemaking education. Problems and required reports will be in terms of specific situations as far as possible. Credit: 2
SS

TECHNIQUE COURSES IN HOME ECONOMICS

Courses described below have been arranged in collaboration with the State Board of Vocational and Adult Education. The presentation of this group of technical courses has resulted from investigations made in the vocational schools of the state and because staff members and teachers have expressed a need for work of this type.

These classes to be offered during the summer session will be first available for teachers from City Vocational schools and the Rural Vocational centers; remaining vacancies may be utilized by other students. Undergraduate, post-graduate, and vocational classification credit will be allowed upon the completion of course requirements.

Home Economics 240 Tailoring as Applied to Home Sewing

A basic course in tailoring techniques planned particularly for teachers working with out-of-school youth and adults. Instruction will be given in the making of lapels, collars, pockets, sleeves, front facings and buttonholes. A choice will be allowed in construction of a tailored garment or the preparation of samples of these processes, whichever teachers find most helpful for instruction purposes. Construction and manipulation of special tailoring equipment will be included. Credit: 2
SS

Home Economics 241 Advanced Tailoring as applied to Home Sewing

This course in advanced tailoring is designed for teachers who have taken Home Economics 240 or its equivalent. Emphasis will be placed on developing skill in using tailoring equipment and in considering special problems of class members in tailoring processes. Teachers will have the opportunity to prepare illustrative material for teaching out-of-school youth and adults. Credit: 2
SS

Home Economics 242 Costume Millinery

This course is planned to develop some ability in the construction and renovation of hats. Consideration will be given to tools, materials, styles, construction fundamentals, care and renovation. Students will furnish their own materials. Special demonstrations in costume millinery will be presented. Credit: 2
SS

Home Economics 243 Rug Design and Construction

The course is planned to give instruction in rug design and construction. Emphasis will be placed on individual projects, giving the students experiences in the selection of materials and equipment. Selection of materials, preparation if needed such as dyeing, color harmonies and designing of patterns for rugs will be stressed. Students may select one type of rug on which they wish to work. Special consideration will be given to rug hooking. Credit: 2
SS

Home Economics 245 Constructing Slip Covers and Draperies

A course designed to help homemaking teachers work with students in constructing slip covers, draperies, and other home accessories. Equipment, materials, types of slip covers and draperies, procedure in construction, and the care of slip covers and draperies will be considered. Instruction in special finishes for slip covers and draperies will be given. Students may provide the piece of furniture upon which they wish to work. Those students finding it impossible to provide for their own individual project will be given an opportunity to work in groups upon specially arranged projects. Credit: 2
SS

Home Economics 246 The Repair and Maintenance of Home Furniture

A course for teachers to help them meet specific problems in the improvement and care of home furniture. Instruction will be given on simple upholstery techniques for home repair and maintenance of furniture, such as applying webbing, tying springs, covering, padding, stitching, trimming, cording, lining, and other processes. Emphasis will be placed on selection of furniture coverings, planning the coverings, using tools and accessories for home repair or upholstery. Opportunities will be provided for experience in finishing and refinishing wooden surfaces. Students should make an effort to provide their own work project.
SS Credit: 2

Note: Home Economics 244 Weaving—See page 61.

INDUSTRIAL EDUCATION

SHOP WORK, DRAWING, AND DESIGN

All courses in this group are nine weeks in length, meeting daily. Due to the variation in the types of content included in these courses the following tabulation is given to indicate the time requirements for credits.

Figures in parentheses indicate hours in preparation:

1 period per week	(2)	18 wks. 1 semester hour
2 periods per week	(1)	18 wks. 1 semester hour
3 periods per week	(0)	18 wks. 1 semester hour
6 periods per week	(0)	9 wks. 1 semester hour
12 periods per week	(0)	9 wks. 2 semester hours
10 periods per week	(2)	9 wks. 2 semester hours

Industrial Education Orientation

(For Industrial Education Freshmen.)

Admission requirements, program operation, attendance regulations, credits, scholastic measurement. Analysis of characteristics of a good performance in shop or drawing courses, in professional courses, in academic courses, and as a teacher. Personnel problems in physical, social, and mental phases. Curriculum opportunities, professional requirements, trend in requirements in calls for teachers. Analysis of personal performances. Significance of choices available.
Sem. I. Credit: 0
Bowman, Price Meets 1 hr. per week, Sem I

DRAWING

Industrial Education 121 Elements of Mechanical Drawing

Basic relations. Organization patterns. Graphic representation of fabricated objects by various drawing techniques including, orthographic projection, development, production illustration, etc.
Sem. I. II. Credit: 2
Green (2-6)

Industrial Education 234 Mechanical Drawing

Prerequisite: Industrial Education 121.

Advanced problems in projections, auxiliary views, intersections, revolutions and developments.
Sem. I. II. Credit: 2
Green (2-8)

Industrial Education 130 Aircraft Drafting

Prerequisite: Industrial Education 121.

Airfoil profiles, L E. radius, angle of incidence, wing construction, elevator and stabilizer details, fuselage, landing gear, tubular structures, rigging details, engine mounting.
Sem. I. II. Credit: 2
Green (2-8)

Industrial Education 226 General Drawing

Prerequisites: Industrial Education 118 and 121.

The place of drawing in general education. Life situations, organization patterns, social and economic background. Problems involving the use of various types of organization patterns including flow sheets, operation diagrams, comparative value charts, working drawings, etc.
Sem. I. II. Credit: 2
Green (2-8)

Industrial Education 228 General Drawing

Prerequisites: Industrial Education 121, 118.

This course is planned for those who wish to make contact with phases of drawing that have not been stressed in other drawing courses. Modern techniques are utilized and explained in light of teaching the drawing at various levels in high school or vocational school. A student is urged to concentrate on those shop techniques that he feels he needs in teaching. The organization of a teaching syllabus in drawing is prepared for a subject that will aid the student in his student teaching or out in the field. It is recommended that the concentration be in his chosen field if possible.

Credit: 2
Sem. I, II. (2-8)
Ray

Industrial Education 227 Machine Drawing

Prerequisites: Industrial Education 118, 121 and one course from the metal work group.

A popular treatise on machines. Social and economic aspects, analysis of machines, historical development, materials, shop processes. Some elements in machine design. Standard parts. Graphic instructions for fabricating machine parts.

Credit: 2
Sem. I, II. (2-6)
Green

Industrial Education 229 Machine Drawing

Prerequisites: Industrial Education 227, Mathematics 211.

Cams and gears. Analysis of motion, motion diagrams. Design of various types of cams. Use of odontograph in gear layout. Spur and bevel gears. Worm and worm wheel.

Credit: 2
Sem. I, II. (2-6)
Green

Industrial Education 329 Machine Drawing

Prerequisite: Industrial Education 227.

Production illustration. Various types of mechanical pictorial representation applied to machine parts.

Credit: 2
Sem. I, II. (1-8)
Green

Industrial Education 433 Machine Drawing

Prerequisite: Industrial Education 329.

Planning and designing machines. Considerations of strength, use, operation, manufacture. Planning jigs and fixtures.

Credit: 2
Sem. I, II. (1-8)
Green

Industrial Education 118 Freehand Drawing

A study of the basic fundamentals involved in freehand drawing such as lines, circles, ellipses, geometric solids, freehand perspective, shade and shadows, still life, thumbnails, technical sketching, blackboard practice, pastels or crayon, pen and ink work. A term sketch is submitted at the end of the course.

Credit: 2
Sem. I, II. (2-8)
Ray

Industrial Education 224 Freehand Drawing and Design

Prerequisite: Industrial Education 118.

This course is advanced freehand drawing and designing: a study of lettering and alphabets: monograms, trade marks, seals, book plates, ornamental signs, either in metal or wood, entrances, garden furniture, advertising layouts, show card and poster work; silk screen and stencil cutting, memory sketches required daily. Industrial arts design is stressed. Crayons and water color sketching.

Credit: 2
Sem. I, II. (2-8)
Ray

Industrial Education 231 Architectural Drafting

Prerequisites: Industrial Education 121, 118.

Basic elements in the planning and construction of residential buildings, frame and masonry, lettering, symbols, conventions, footings, foundations, sill construction, cornices, windows, stairs, fireplaces, and accessories. A preliminary study of drawings plans, involving elevations, floor plans, details and perspective rendered in pastel. Illustrated lectures on kitchen layouts, living rooms, dining rooms, bathrooms, sleeping rooms, etc.

Credit: 2
Sem. I, II. (2-8)
Ray

Industrial Education 233 Architectural Drafting

Prerequisites: Industrial Education 121, 118, 231.

Preparation of preliminary sketches for the problem: a set of working drawings for a residence five or six rooms, costing $6,000 to $10,000 in frame or masonry involving floor plans, elevations, details, perspective estimates, and specifications. Lectures on current style of residential architecture with slides. Study of kitchens, bathrooms, living rooms, bed rooms, basements, and recreational rooms, with colored slides. A term report and class discussion on some phase of current building practice. Prefabrication and its future. Desirable references in the field are stressed and selections of teaching material.

Sem. I, II.
Ray

Credit: 2
(2-8)

Industrial Education 331 Architectural Drafting

Prerequisites: Industrial Education 121, 118, 231.

The student creates his own design following some definite style of his own choosing. Preliminary plans are prepared from which a model is made, landscaped, rendered, and photographed. Model making, studies of uses in all proposed housing layouts, illustrative material through slides. Studies of current architectures including materials, substitutes, and preassembled units in housing.

Sem. I, II.
Ray

Credit: 2
(2-8)

Industrial Education 431 Architectural Drafting

Prerequisites: Industrial Education 121, 118, 231, 331.

Orders of architecture, history of architecture, reports on assignments, contracts, heating and sanitation, business housing, and public buildings. Lectures on readings on architecture, past, present, and future. Study of architecture and its relation to human progress including significant factors in vocational guidance.

Sem. I, II.
Ray

Credit: 2
(2-8)

Industrial Education 471 Architectural Drafting

Prerequisites: Industrial Education 231, 233, 331, 431.

Fundamentals of architectural design. Shades and shadows, coordinate planes, casting shadows, determination of shadows. Perspective drawing, types of perspective, classic orders, proportion, elementary principles of architectural rendering. Preparing thumbnail sketches of proposed buildings, and drafting elevations for study. Exhibition and rendering drawings of proposed layouts.

Sem. I, II.
Ray

Credit: 2
(2-8)

ELECTRICAL WORK

Industrial Education 119 Industrial Electricity

Essentials of electricity including wire splicing, Ohm's Law experiments, cells and batteries, signal circuits, simple light and power circuits, house wiring, direct current lighting and power circuits, direct current generators and motors, practical applied problems.

Sem. I, II.
Good

Credit: 2
(3-4)

Industrial Education 343 Industrial Electricity

Prerequisite: Industrial Education 119.

Magnetic circuits as applied to coils, motors, generators, and transformers. Insulation and insulators. Armature windings and winding projects. Mutual and self-inductance. Conduit wiring projects.

Sem. I, II.
Good

Credit: 2
(3-4)

Industrial Education 345 Industrial Electricity

Prerequisites: Industrial Education 119, 343.

Theory and essentials of alternating currents. Shop problems dealing with alternating current measuring instruments, transformers, and various types of alternating current motors and generators and their accessories.

Sem. I, II.
Good

Credit: 2
(3-4)

Industrial Education 347 Electricity (Radio)

Prerequisite: Industrial Education 119 (Essentials of Electricity), or equivalent.

Theory and fundamentals of radio communication circuits. Many standard circuits

are set up and tested in the laboratory. Part of the class period will be devoted to code practice.
Sem. I, II. Credit: 2
Kranzusch (4-6)

Industrial Education 357 Electricity (Radio)

Prerequisite: Industrial Education 347 or equivalent.

A continued study of radio communication circuits and power supplies. The class period will be devoted largely to shop and laboratory work.
Sem. I, II. Credit: 2
Kranzusch (8-2)

GENERAL MECHANICS

Industrial Education 253 General Mechanics

Prerequisites: Industrial Education 121, 119, 115, 107, 109.

Selections of jobs typical for the content courses in home mechanics; practical mechanics; and simple mechanics. General education is made the basis for the major portion of the shop assignments. Because of its general character, much of the work is adaptable to courses set up for girls in these fields. Students, in addition to their mechanical work, are required to make solutions of problems of management necessary to the successful operation of the general shop. Bench and mechanical equipment affords excellent opportunity for work in projects in woodwork, plumbing, electricity, woodfinishing, sheet metal repairs, and bench metal work.
Sem. I, II. Credit: 2
Kranzusch (1-9)

Industrial Education 365 General Mechanics

Prerequisite: Industrial Education 253.

Continuation of General Mechanics in additional and advanced problems. Problems of arts and crafts nature are added to the already varied program. This additional field lends itself to work of an extracurricular character. New fields of general mechanics nature are explored and original research in developing new problems is stressed. The informational as well as the manipulative content is covered.
Sem. I, II. Credit: 2
Kranzusch (10)

Industrial Education 369 General Industrial Mechanics

Prerequisite: Sophomore standing or equivalent in technical sequence.

A general survey of the power, mechanics, and materials involved in the various types of industries and in the machines, appliances and mechanical devices used by the average citizen. With this survey of each industry a study is made of the history and development, sources of raw materials, methods of production and production control, labor conditions, government legislation, and economic significance.
Sem. I, II. Credit: 2
Good (3-4)

Industrial Education 375 Industrial Mechanics

Prerequisites: Industrial Education 369 and junior or senior standing in technical sequence.

This is an advanced course in industrial mechanics operated very largely on an individual assignment basis. Each member of the class is assigned or selects special phases in individual industries for more concentrated study. His findings are presented to the class for discussion and analysis. The purpose of these courses is to prepare teachers to develop the desire and ability of high school students to recognize and interpret mechanical and social change in our industrial life.
Sem. I, II. Credit: 2
Good (3-4)

METAL WORK

Industrial Education 242 General Motor Mechanics

A basic course in the study of the internal combustion engine and its application to units of transportation and stationary equipment. Information on the use of power and its subordinate units, as applied to travel by land, sea and air, and to stationary engines and equipment will be studied through the use of laboratory demonstrations and illustrative material. Assignments in report form will be emphasized.
Sem. I, II. Credit: 2
Kranzusch (4-6)

Industrial Education 245 Auto Mechanics

Prerequisites: Industrial Education 113, 119.

Seven weeks to the study, repair, and adjustment of the various units of the chassis not including the engine, on live cars brought into the shop. Body and fender repair and refinishing is emphasized in this course.
Sem. I, II.
Kranzusch
Credit: 2
(2-6)

Industrial Education 247 Auto Mechanics

Prerequisite: Industrial Education 245.

Modern shop practices in engine tune-up and in overhauling and repairing auto engines and their accessories. Reboring and honing cylinders; fitting new pistons, rings and piston pins; reseating, grinding, and testing valves, repairing and adjusting carburators.
Sem. I, II.
Kranzusch
Credit: 2
(2-6)

Industrial Education 341 Auto Mechanics

Prerequisites: Industrial Education 245, 247.

Electrical equipment of the automobile. Construction, principles of operation, adjustments and repair of the various types of circuits, operating units, and storage batteries. Practice in diagnosing, locating, and repairing electrical troubles on live cars.
Sem. I, II.
Kranzusch
Credit: 2
(2-6)

Industrial Education 451 Auto Mechanics

Prerequisites: Industrial Education 245, 247, and 341.

For teachers and prospective teachers of auto mechanics, giving experience in the preparation of instructional units for junior and senior high schools and for vocational schools. Selection and organization of teaching material, shop lay-out, student routing and shop management, equipment selection, dispensing and checking of shop tools and equipment.
Sem. II.
Kranzusch
Credit: 2
(4-2)

Industrial Education 243 Foundry

Molding, involving cutting and tempering molding sand preparatory to ramming bench and floor molds. Core making involving making and baking of cores for molds. Cupola practice, including operation of the cupola and the handling and pouring of molten metal. Selecting, mixing, and melting pig iron and machinery scrap to secure machineable qualities in the castings. Two or three heats of cast iron. Melting and pouring of brass and aluminum in a crucible.
Sem. I, II.
Milnes
Credit: 2
(2-8)

Industrial Education 337 Foundry

Prerequisite: Industrial Education 243.

Advanced molding projects match plates for production work; metallurgy of the foundry. Several heats of iron, brass, and aluminum.
Sem. I, II.
Milnes
Credit: 2
(2-8)

Industrial Education 113 Machine Shop

Construction and operation of the lathe, milling machine, drilling machine, shaper, and grinding machine. Shapes of the cutting tools, grinding setting, and operating. Calculations to obtain the correct feeds and speed for cutting various metals. Related technical information. Projects involve basic processes on each machine.
Sem. I, II.
Milnes
Credit: 2
(2-8)

Industrial Education 235 Machine Shop

Prerequisite: Industrial Education 113.

Spiral gear cutting and rack cutting, involving the use of the milling machine. Internal and external square thread cutting on the lathe. Cylinderical grinding on the universal grinder. Stress upon related information pertaining to machine shop work.
Sem. I, II.
Milnes
Credit: 2
(2-8)

Industrial Education 237 Machine Shop

Prerequisite: Industrial Education 235 and 227.

Worm gearing, tool and cutter grinding, and problems in tool making. Planning, drilling, and tapping cast iron machine parts. A survey of the trade is made with view to organizing material for teaching. Material uses and cost studies.

Credit: 2
Sem. I, II. (2-8)
Milnes

Industrial Education 435 Machine Shop

Prerequisite: Industrial Education 237.

Bevel-gear cutting, punch and die making, internal grinding, problems in tool making. Studies of selection of appropriate materials. Organization of project material and instructional units.

Credit: 2
Sem. I, II. (2-8)
Milnes

Industrial Education 115 Sheet Metal

Fundamental machine and hand tool operations; care, use, and adjustment of sheet metal equipment; the development of simple patterns, involving parallel and radial lines; direct layout and short methods; study of markets, manufacture, buying, etc. of equipment and supplies.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 239 Sheet Metal

Prerequisite: Industrial Education 115.

Drafting irregular patterns by means of triangulation; triangulation using the top view in the layout; triangulation using both top and side view in the layout; triangulation using the side view only in the layout; shop practice in the make-up of irregular fittings from various fields of sheet metal work.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 241 Sheet Metal

Prerequisites: Industrial Education 115, 239.

A course for advanced students in sheet metal work, involving further practice in pattern drafting and shop work, including irregular fittings developed by either the triangulation, parallel, or radial line method. Projects dealing with cabinet construction as applied to sheet metal work. Fundamentals of aircraft sheet metal work including a study of materials and equipment, as well as instruction and practice in layout, cutting, drilling, burring, riveting and air gun riveting.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 333 Sheet Metal

Prerequisites: Industrial Education 115, 239, 241.

Aircraft sheet metal work involving instruction and practice in such operations as raising, forming, stretching, shrinking, bending, etc. Also the working of copper, brass, aluminum, pewter, monel metal and others; their uses and application in sheet metal work; projects involving soft and hard solder, spinning, raising, chasing, seaming, piercing, etching, coloring, etc.; study of related and technical information, markets, and supplies.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 335 General Metal

Prerequisite: Industrial Education 113.

General shop of the trade group type. Organization, courses of study, layout, equipment, operation, uses of instructional material, supplies. Shop work in selected projects, representing bench metal, forging, heat treating, machine shop, oxy-acetylene welding.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 455 Oxy-acetylene Welding

Prerequisite: Industrial Education 335.

Instruction and use of equipment such as generators, manifolds, tanks, gauges, roches, etc. The study of safety from the welder's view point. Much time is devoted to the study of welding of all common metals. Both hand and machine cutting of steel is done by the student. Welds are tested and checked. A study is made of filler rods, fluxes, etc.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 457 Electric Arc Welding

Prerequisite: Industrial Education 335.

A study is made of the different types of arc welding equipment, their characteristics and operation, safety, symbols, types of electrodes, etc. Actual welding practice involves the preparation of joints, striking and manipulation of the arc in various weld positions, welding of the common metals with different types of welding machines, hand and machine cutting, destructive and non-destructive testing of welds.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

Industrial Education 355 General Metal

Prerequisites: Industrial Education 335 and 455.

Continuation of General Metal I. Advanced work in ornamental and tool forging, oxy-acetylene welding, power hammer work, bench metal, electro-plating, heat treating, and the use of ceramic tile in combination with metal. A study is made of new machines, tools, and metals, their manufacturing costs, etc.

Credit: 2
Sem. I, II. (2-8)
Keith, Chinnock

PRINTING

Industrial Education 117 Elementary Composition

Elements of composition, stonework, and platen press work. Graded projects in straight composition involving basic operations of job printing, proof reading. Supplementary lectures, demonstrations, and tests given in definite teaching units.

Credit: 2
Sem. I, II. (2-8)
Baker, Carlsen

Industrial Education 255 Advanced Composition

Prerequisite: Industrial Education 117.

Advanced Composition. Problems in display composition, stonework, and platen press work. An introduction to commercial problems and jobs, through the use of typical projects. Allows gain in skill as craftsman. Supplementary lecture periods devoted to typographical design and its application.

Credit:2
Sem. I, II. (2-8)
Carlsen

Industrial Education 257 Machine Composition

Prerequisites: Industrial Education 117, 255.

Study of intertype and linotype machines. Includes study of the complete mechanism, care, and operation of typesetting machines. Time divided between mechanism and practice operating. Sufficient time is spent on study of mechanism of the machine to give complete knowledge of principles and care.

Credit: 2
Sem. I. II. (2-7)
Baker

Industrial Education 351 Printshop Mechanics

Prerequisites: Industrial Education 117, 255, 257, 459.

Course designed to cover study of adjustments and care of all machines found in the school and job shop, including platen and cylinder presses, automatic feeders, stereotype equipment, linotype, intertype, monotype, paper cutters, stitchers, and folders. Operation tests on each. Study and reference will include special work and storage equipment.

Credit: 2 or 4
Sem. I, II. (5-5)
Carlsen

Industrial Education 259 School Publications

Prerequisites: English Composition 102a and b.

Prepares teachers to handle school periodicals as a part of their work. Study of school newspapers, magazines, and annuals from the viewpoint of organization and operation. Elements of journalism and their application from the viewpoint of the advisor. The Stoutonia, the weekly college newspaper, and morgue used as a laboratory.

Credit: 2
Sem. I, II.
Baker

Industrial Education 361 Printing Design

Prerequisites: Industrial Education 117, 255.

Application of elementary art and design to practical printing. Study of type design, commercial layouts, colors, papers, cover design, folders, and booklets. Lectures, shop work and drawings. Application of printing techniques to design.

Credit: 2
Sem. II. (4-6)
Baker

Industrial Education 449 Printing Economics

Prerequisites: Industrial Education 117, 255.

Acquaint the teacher of printing with economic problems of both commercial and school print shops. Shop organization and management, purchasing of equipment and supplies, shop layouts, and cost estimating. Lectures supplemented by references and practical problems. Part time devoted to organization of material for instructional purposes, and development of printing tests.

Sem. I, II. Credit: 2
Baker (6-4)

Industrial Education 459 Presswork

Prerequisites: Industrial Education 117, 225.

Practical problems and operation of platen and cylinder presses, and automatic feeders, imposition of large forms. Research problems in presswork. Field study of modern presses, multiple-color, rotary, rotogravure, offset, and automatic feeding machinery. Problems in bindery operations involving bindery machinery. Study of paper and inks and their importance in the press room. Field trips.

Sem. I, II. Credit: 2
Carlsen (10)

Industrial Education 363 General Graphic Arts

An elementary course in basic graphic arts reproductive processes intended for those wishing to offer general exploratory and informational units to classes of secondary school levels. A correlation between the fine and practical arts. Lecture, demonstration and production units are offered in letter press, stereotype, wood and resilient block-cutting, lithography, etching, silk screen, stencil, offset, ditto, engraving, acquatints, embossing, layout, paper-making, book binding, photo engraving, and steps in the production of a book. Emphasis on development of instructional material.

Credit: 2-4
Baker (2-8)

Industrial Education 359 Cooperative Industrial Printing

Prerequisites: Industrial Education 117, 255, or equivalent.

Full time work in a commercial shop under the supervision of a coordinator. Campus cooperative printing consists of production work at the college press under shop conditions. No outside preparation. Time required equivalent to double regular shop courses. On request for qualified students. Additional credit by arrangement for qualified students.

All year. Credit: 2-4
Baker, Carlsen (2-4)

Industrial Education 557 Experiments in Printing

Prerequisite: Graduate Standing.

Work in this course is based on individual projects affording opportunity to experiment in the field of graphic arts in advance of opportunities offered in regular courses. Projects selected must contain approved factors of educational significance, technical accuracy, and be of a type not previously covered by the individual. Definite use of shop laboratories as well as literature is expected. Work is carried on by arrangement and conference and is put in permanent form by means of a term paper.

SS Credit: 2
Baker

WOODWORK

Industrial Education 107 Hand Woodwork

Study of and performance in fundamental processes and operations; tool and material nomenclature; fitting, setting, adjusting, and manipulative hand tools; getting out stock; laying out and making some of the common joints; construction of one or more small projects; identification of woods and estimating quantities of lumber.

Sem. I, II. Credit: 2
Soderberg (3-7)

Industrial Education 131 Machine Woodwork

An elementary course designed to acquaint the student with the setting up, operating, and care of the basic and most commonly used woodworking machines. Machine tool fitting illustrated through lecture demonstrations. Instruction and experience in the use of working drawings, stock cutting bills, patterns and jigs. Machining parts for one or more projects. Wood identification and estimating quantities of lumber are also stressed.

Sem. I, II. Credit: 2
Soderberg (3-7)

Industrial Education 215 Cabinet Making

Prerequisite: Industrial Education 311 for those who plan to take both 311 and 215.

Instruction and experience in tests and records of moisture; shrinkage and expansion of wood; atmospheric temperature, relative humidity and dew-point indoors and out; ratios of atmospheric conditions to moisture; expansion and contraction of wood; case-hardening; glue and gluing; classification of construction and characteristic relationship of structural members in projects; classification of detailed shapes and measurements; and correct use of joints. Opportunity is available to build projects selected in Industrial Education 311.

Sem. I, II.
Hansen Credit: 2
(3-7)

Industrial Education 311 Design in Furniture and Case Work

Study and instruction in laws, theories, and principles of aesthetic and structural design. Classification and selection of regular and supplementary projects for given educational levels and objectives. National standard measurements of nominal and actual dimensions of lumber and hardware. Making isometric sketch and working drawings for at least one regular project for a specified educational level. Full size models of parts to stimulate visualization. Billing material and writing job plan. The selected project should be made in later courses when possible. A field trip is included.

Sem. I, II.
Hansen Credit: 2
(3-7)

Industrial Education 312 Cabinet Making

Prerequisites: Industrial Education 107, 131, 311, 215, and arrangement with instructor.

Methods, procedures, techniques and standards in open and enclosed construction; making and fitting doors and drawers; hanging doors; fitting hardware and trim; veneers and veneering. Provision for continuation of large or complicated projects with less formal content and more freedom for self-expression.

Sem. I, II.
Hansen Credit: 2
(2-8)

Industrial Education 313 Design in Furniture and Case Work

Prerequisite: Industrial Education 311 and arrangement with instructor.

Extension and expansion of Industrial Education 311. Provides for additional instruction and experience in designing, laying-out and making rods, patterns, jigs, forms, or other fixtures used in constructing the project. Designing and laying out irregular shaped machine knives. Writing some instruction sheets for specific cases and conditions. Round-table discussions analyzing factors in proposed plans.

Sem. I, II.
Hansen Credit: 2
(2-8)

Industrial Education 411 Cabinet Making

Prerequisites: Industrial Education 107, 131, 311, 215, 312 and arrangement with instructor.

The course includes forms, arrangements and expressions in requisitions, orders, invoices, bills of lading, stock bills, inventories and shop detail sketches; buying care and use of supplies and equipment; teaching problems, occupational opportunities; shop layouts and tool supply systems; personnel organization and management. Projects not completed in previous courses may be continued. Extra curricular use of the shop is allowed in and after this course.

Sem. I, II.
Hansen Credit: 2
(2-8)

Industrial Education 219 Carpentry

Prerequisites: Industrial Education 107, 131.

Surveying and staking out for buildings; concrete forms construction, floor framing, wall framing, and roof framing in actual house construction; the steel square as used in roof framing; sheathing, shingling and insulating; correlation between workers in carpentry and between the building trades. Reference assignments and "round-table" discussion.

Sem. I, II.
Nelson Credit: 2
(2-8)

Industrial Education 319 Carpentry

Prerequisites: Industrial Education 107, 131, 219.

Review of equal pitch roof framing; study and construction of unequal pitch roof, framing; cornice construction, porch framing and finishing; exterior trimming; scaffold construction; study of building materials; quantity surveying and ordering materials; projects for teaching carpentry; workers in the carpentry trades; reference assignments and "round-table" discussions.

Sem. I, II.
Nelson Credit: 2
(3-7)

Industrial Education 421 Carpentry

Prerequisites: Industrial Education 107, 131, 219, 319.

Interior finishing; elements of stair building; polygonal and curved roof and ceiling construction; structural design in framing; structural and aesthetic design in finishing; organization of teaching material and shop equipment for courses in carpentry; supervision of a carpentry teaching job; carpentry as a life work; reference assignments and reports.

Credit: 2
Sem. I, II. (10)
Nelson

Industrial Education 116 General Woodwork

Prerequisites: Industrial Education 107, 131.

A general shop course which provides (1) information and practice in several basic kinds of woodwork and (2) observation and study of a revolving plan for general shop instruction. The nine-week course is divided into three three-week units and the class into three groups. Each group changes to a new unit of instruction at the end of three weeks. The range of work covered includes elementary upholstery, layout work for wood construction, pattern and form making, Keenes' cement casting and finishing.

Credit: 2
Sem. I, II. (2-8)
Nelson

Industrial Education 263 Millwork

Prerequisites: Junior or senior rating and arrangement with instructor.

Limited to two students each quarter. The work deals primarily with millwork products such as sash, doors, molding, window and door frames, built-in cabinet work which furnish problems for correlation with architectural drawing, carpentry, contracting and line yards in a building trades cycle. Milling stock for other classes and departments.

Credit: 2
Sem. I, II. (2-8)
Hansen

Industrial Education 267 Millwriting

Prerequisite: Senior rating and arrangement with instructor.

Limited to two students each quarter. This course includes care and maintenance of woodworking machines; improvements in equipment; power saw and knife fitting; band saw brazing; alignment and adjustment of machine parts; babbeting; fitting and adjusting bearings; power transmission problems; belt splicing; making molding knives; cutting angles; backing clearances; grinding bevels; cutting speeds; rates of feed and shop layouts.

Credit: 2
Sem. I, II. (2-8)
Hansen

Industrial Education 371 General Woodwork

Prerequisites: Industrial Education 117, 131, 116.

This course is a follow up of General Woodwork, Industrial Education 116, which offers further expansion in kinds and choices of woodwork. Experiences gained in previous courses are broadened through application in new combinations and in a variety of selected projects. General shop planning and shop improvement are studied. Shop and classroom equipment is planned, designed and constructed as individual or group projects. Opportunities are offered for developing individual interests. Blue prints, photographs and other illustrations of the class work are prepared and made available to students.

Credit: 2
Sem. I, II. (2-8)
Nelson

Industrial Education 440 General Materials Supplementing Wood

The purpose of this course is to develop ability to work with a wide range of materials supplementing natural wood. Some of these are plywood, presswood, fiber, plastics, fiber board, cork, linoleum, sheet rubber, asbestos, etc. Emphasis is placed on selection of materials in terms of suitability, appearance and use of the project. Devices are studied and methods are practiced in cutting, shaping, assembling and finishing these materials.

Credit: 2
Sem. I, II. (2-8)
Nelson

Industrial Education 211 Aircraft Construction

Building full-size pre-flight training planes, studying aircraft nomenclature, materials, structural designs, airfoils, lofting, etc. Exercises in joint making and gluing to develop tolerances for airworthiness. Building full size airworthy gliders, sail planes and power airplanes. Shop and laboratory experience is coordinated with science, mathematics, aircraft design and drafting, and CAA requirements.

Credit: 2
Sem. I, II. (3-7)
Hansen

Industrial Education 111 Woodturning

Prerequisites: Industrial Education 107, 131, 118.

Spindle turning, concentric and offset. Face plate and chuck turning. Mandrel turning. Segmental and other built-up work. Boring and internal turning. Split turning, cutting spirals. Fluting. Inlaying. Applying finishes to turned articles. Shaping and sharpening woodturning tools. Standard and special turning tools. Modern production methods and machines for woodturning.

Sem. I, II. Credit: 2
Nelson (2-8)

Industrial Education 447 Cooperative Woodwork on Campus

Prerequisite: Arrangement with instructor.

The course includes production problems in building equipment and teaching-demonstration samples and models for the mill room and cabinet shop. Projects which have limited value in experience and training are excluded.

Sem. I, II. Credit: 2
Hansen (1-9)

Industrial Education 448 Cooperative Woodwork in Industry

Prerequisite: Arrangement with instructor.

Through affiliations with industry, opportunities may be available for practical experience in woodwork manufacturing plants in nearby cities. Conferences with instructors and with director are necessary before arrangements can be made.

Sem. I, II. Credit: 2
Hansen

Industrial Education 209 General Finishing

Study and practice in application and uses of basic finishes for composition material, plastics, wood, and metal. Methods of refinishing. Study and practices in color theory. Practical experience with new types of finishing materials. Modern practice in the use of spraying equipment. Application and use of baked finishes.

Sem. I, II. Credit: 2
Soderberg (2-8)

Industrial Education 221 Painting and Decorating

Prerequisite: Industrial Education 209.

Study and practice in color theory, color mixing and applications in various mediums. Instruction sheets and pupil selection of special type finishes and methods; two-tone antique methods, stenciling, striping, glazing, blending, hazing, marbling, etc. Panels of special wall finishes, stippling, blending, texturing with plastic materials. Production work with the use of the spraying equipment. Experience with basic metal finishing methods and materials.

Sem. I, II. Credit: 2
Soderberg (2-8)

Industrial Education 225 Patternmaking

Prerequisites; Industrial Education 107, 227.

Wood patterns of machine parts for casting in iron, brass and aluminum. Study of types of work performed by patternmakers. Patternmaking allowances; shellacking a pattern to convey information to a molder. Patterns involving solid, split, and segmental construction; core boxes for whole and half cores; right and left hand, interchangeable baked sand cores. Patternmaking materials. Visit to a foundry.

Sem. I, II. Credit: 2
Milnes (2-8)

Industrial Education 325 Patternmaking

Prerequisites: Industrial Education 225, 243.

Pattern for sheave wheel; bevel gear blank; mounted and gated patterns for production work; irregular shaped patterns and match plates; two inch soil pipe fittings involving bench lathe work and built up core box construction. Segmental pully construction involving spokes, webs, and bosses. Survey of patternmaking and organization of instructional material.

Sem. I, II. Credit: 2
Milnes (2-8)

BUILDING CONSTRUCTION

Industrial Education 249 Bricklaying

Elements of bricklaying, including spreading of mortar, and the raising of corners and building walls in the various bonds, chimneys, piers, walling in frames, turning arches, building fireplaces. Preparation of instructional material; analysis of the

trade for instructional units that may be used in industrial education. Demonstrations and class work carried on under actual trade practice. Organization of teaching units for the intermediate and upper levels in high schools with an approved state outline. Vocational aspects given due consideration.
Sem. I, II. Credit: 2
Ray (1-9)

Industrial Education 251 Bricklaying

Prerequisite: Industrial Education 249 or its equivalent.

A continuation of Bricklaying 249 in advanced work, speed problems, motion study. Problems planned to involve units in the trade necessary for working under field conditions. Related work, drawing detail problems. Organization of instructional units for specific cases. Recommendations for outside jobs of good instructional value. Study of equipment, shop layouts, trade tests, scaffolding, safety and hygiene. Blueprints and outlines issued for reference in instructional planning.
Sem. I, II. Credit: 2
Ray (1-9)

Industrial Education 354 Concrete Work

Basic elements of concrete work; mixtures, foundations and footings, sidewalks, curbs and gutters, fence and garden posts, flower pots, benches, sweep work, moulds, form work, terazza and inlay work. Ornamental concrete work suitable for high school unit and general shops. Outline of instructional units and phases of work emphasized in elementary work with blue prints of typical problems.
Sem. I, II. Credit: 2
Ray (1-9)

PROBLEMS IN INDUSTRIAL EDUCATION

Industrial Education 510 Problems in Industrial Education (Research)

Prerequisite: Graduate Standing.

A course planned for the graduate student in the field of industrial education who has had Research Procedures and who is about to begin work on his investigation. The material is designed to help the student apply general research procedures to his individual investigation so that he may be able to carry out his own problem successfully. All assignments are based on actual problems that must be solved in completing an investigation in the field of industrial education. Special attention will be given to the application of this material to each specific investigation.
(Note: A fee of $1.00 is charged for syllabus issued.)
Wigen Credit: 2

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